

**THREE ESSAYS ON THE POSSIBILITIES FOR  
REALIZING WOMEN’S “COLLECTIVE  
INTERESTS”**

by

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Submitted to the Graduate Faculty of  
the Kenneth P. Dietrich School of Arts and Sciences in partial  
fulfillment

of the requirements for the degree of

**Doctor of Philosophy**

University of Pittsburgh

2019

UNIVERSITY OF PITTSBURGH  
DIETRICH SCHOOL OF ARTS AND SCIENCES

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# THREE ESSAYS ON THE POSSIBILITIES FOR REALIZING WOMEN'S "COLLECTIVE INTERESTS"

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University of Pittsburgh, 2019

Despite growing attention to the need to increase women's equity in political decision-making worldwide, widespread gains have not always followed from policies or efforts designed to increase women's political representation and participation as expected. One reason this expectation exists is because of essentialist notions of women as generally inclined to work together to represent their "collective interests." This dissertation consists of three essays that evaluate the extent to which those collective interests exist. In the first two essays I examine whether ethnic and socio-economic class differences present obstacles to cooperation among women using a public goods experiment in Lebanon. In the third essay, I look at how differences among women in terms of their political connectedness affect their likelihood of prioritizing women's interests in the context of reserved quota seats for women in political office. Overall, these essays highlight the importance of understanding how differences amongst women, particularly differences between elite and non-elite women, affect the advancement of women's collective interests. I also contribute by demonstrating the importance of taking intersectionality seriously in order to develop policies that more effectively address the problem of gender inequality worldwide.

**Keywords:** gender, representation, women and politics, gender quotas, intersectionality, ethnic politics, socio-economic class, identity politics, collective action, cooperation, public goods experiment, Lebanon, Uganda.

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## 1.0 INTRODUCTION

### 1.1 PROJECT MOTIVATION

Recent years have witnessed growing attention to the need to increase gender equity in political decision-making worldwide. To this end, a range of policies and interventions have been implemented to help promote women’s political participation and representation. For example, quotas for women’s representation in political decision-making have exploded on a global scale, with more than 130 countries adopting some form of gender-based quota or otherwise altering their rules for candidate selection to enhance electoral prospects for women ([Hughes, Krook and Paxton, 2015](#)). Many studies show that these kinds of policies are effective at increasing the number of women in politics ([Paxton and Hughes, 2015](#); [Schwindt-Bayer, 2009](#)). While a wealth of empirical evidence points to the positive impact of policies designed to increase women’s political participation (e.g. [Beaman, Pande and Cirone \(2012\)](#); [Burnet \(2012\)](#); [Zetterberg \(2012\)](#)), other evidence suggests that widespread gains in gender equality have not always followed as expected (e.g. [Franceschet and Piscopo \(2008\)](#); [Eagly and Karau \(2002\)](#); [Duflo and Topalova \(2004\)](#); [Eckel and Grossman \(1998\)](#)).

I argue that a plausible explanation for the persistence of women’s political inequality derives from the fact that many of these policies proceed from an essentialist view of women as generally inclined to work together on behalf of their “collective interests.” Indeed, many arguments in favor of quotas for group-based representation begin from the conceptual starting point that descriptive representation of groups (the degree to which political representatives ‘look like’ the people they represent) is related to the substantive representation of groups



(the extent to which policy-making in political institutions benefits specific groups) (Pitkin, 1967). An assumption implicit in this view is that individuals who belong to certain social groups will do a better job of working to advance the interests of their fellow group members. Yet, the extent to which women as a social group have a coherent set of “women’s interests” that they all share is hotly debated (see, e.g. Bunch (1990)). Instead, it may be more productive to think of gender group membership as one of many overlapping social identities with the potential to influence individuals’ behavior in group settings.

From this perspective, it is critical to investigate the conditions under which differences among women are more or less likely to become salient and affect women’s ability to cooperate on issues of shared interest. This is the task I take on in this dissertation. In focusing on differences among women, my work is heavily influenced by the insights of intersectional scholarship. In the remainder of this introductory chapter, I summarize all three essays before framing my contribution in light of the implications of interpreting my results from the perspective of theories of intersectionality.

## 1.2 OVERVIEW OF THE ESSAYS

Over the course of three essays, I evaluate the extent to which “collective interests” exist and lead to cooperation among women across other salient social divides. Each of the three essays seeks to understand how social group membership relates to the possibilities for effectively ensuring the inclusion of groups in decision-making by examining the conditions under which women are more or less likely to work together in the interest of advancing the welfare of women as a group. In the first two essays I examine whether ethnic and socioeconomic class differences among women present obstacles to cooperation using a public goods experiment in Lebanon. In the third essay, I look at how differences among women moderate the effectiveness of quotas designed to enhance women’s representation in Uganda. I briefly summarize each essay below.

### 1.2.1 Essay 1: Gender, coethnic favoritism, and cooperation in groups

The first essay demonstrates why it is important to consider how differences among women could become more or less salient within group settings depending on other individual-level factors that interact with gender to influence behavior. I do this by contrasting how expectations of individual behavior in groups could differ for men and women even in the same institutional context because of the way that gender interacts with access to political power. Specifically, I investigate how ethnic group cleavages affect cooperation in single-gender groups of men and women in Lebanon, a country context where ethnic (i.e. sectarian) group membership is often thought to be the most salient aspect of social identity.

The literature on cooperation in ethnically divided societies generally anticipates that individuals will cooperate more in homogeneous than in heterogeneous ethnic groups because of the link between coethnic favoritism and access to material benefits. In societies like Lebanon where the distribution of goods and services generally takes place along ethnic lines, ethnic groups are believed to evolve strong norms of cooperation with in-group members. The existence of these strong norms of cooperation within ethnic groups leads to greater trust in coethnics and higher expectations of cooperation within homogeneous ethnic settings. In societies where there is inter-group competition over scarce resources, those groups that are better able to cooperate internally are more likely to out-compete others for control over resources ([Raihani and Bshary, 2015](#)). As such, groups tend to evolve psychological benefits in addition to material benefits for abiding by in-group norms of cooperation.

Yet, there is reason to believe this might not be as true for women as it is for men. In many places where distributive politics overlap with ethnic group membership, women are known to benefit less from access to goods and services through the kinds of clientelistic networks that tend to dominate ethnic political systems ([Benstead, 2016](#); [Wantchekon, 2003](#)). In the absence of clear material rewards for cooperating more within ethnic groups than across them, it is unclear that women would develop the same norms of coethnic favoritism believed to evolve among men. In the absence of clear norms to guide behavior that would favor coethnics over non-coethnics, it may be that women are not less likely to cooperate in mixed-ethnic than in same-ethnic social settings. Alternatively, it is possible that coethnic

favoritism exist among women, but only for the (limited) subset of women with access to material benefits through coethnic networks or who are strongly attached to their ethnic group identity. At the same time, women’s systematic exclusion from participation in politics in ethnic political systems could create a situation where women’s shared gender group identity is more salient than it would be if gender identity did not automatically shift their experience of access to the political, social, and economic system in which they reside. Since women’s gender identity is associated with strong norms of cooperation and prosociality in social psychology (particularly relative to men) (Eagly and Wood, 1991), this suggests that not only could gender identity be more salient for women than men in Lebanon, but it could also be more likely to prime norms of cooperation with other women in single-gender social settings. This norm of cooperation linked to women’s gender identity could plausibly be expected to work against norms of cooperation with coethnics over non-coethnics in all-women group settings.

I evaluate these possibilities using data from a public goods experiment implemented with 120 single-gender groups in Lebanon. Individuals were randomly assigned to participate in either a homogeneous or a heterogeneous sectarian group. I then examine whether the average level of cooperation varies depending on the ethnic and/or gender composition of the group (all-men versus all-women). I find weak but suggestive evidence that men cooperate less in mixed-ethnic than in same-ethnic groups, but no evidence that women are less cooperative in mixed-ethnic compared to same-ethnic groups. I further examine the heterogeneous treatment effects for those with strong versus weak access to benefits through politicians, those with strong versus weak sectarian identity, and those with strong versus weak gender identity. In line with my expectations, I find that women and men differ in how the strength of their attachment to their sectarian identity affects their willingness to cooperate in mixed-ethnic groups compared to homogeneous ethnic groups: strong sectarian men cooperate less in mixed-groups (consistent with the literature), while strong sectarian women do not cooperate at a significantly different level in mixed-sect compared to same-sect groups. However, I also find that while strong gender identity reduces cooperation in same-sect groups for women, it is associated with higher levels of cooperation with coethnics for men. This suggests that gender-based norms may prescribe different behaviors in

mixed-ethnic and same-ethnic group settings.

Most interestingly, I find that both men and women with access to benefits through politicians show more coethnic favoritism in cooperation. This is important, since it suggests that there could be key differences among women in terms of how they cooperate within ethnic political systems. Rather than being unconditionally cooperative with each other, it suggests that one potential barrier to cooperation among women could reside in the extent to which there are divisions among women in access to benefits through elite networks. I build on this result in developing the next two essays where I focus more exclusively on differences among women given the considerable heterogeneity in terms of their willingness to cooperate with one another, a finding that is largely unanticipated in the political science literature to date.

### **1.2.2 Essay 2: Women, socio-economic status, and cooperation in groups**

In the second essay, I pick up on this question of differences among women in terms of access to the distribution of benefits through elite networks by evaluating the extent to which socio-economic class cleavages constitute a potential barrier to collective action among women. This connects to the previous paper in that I only observed reduced willingness to cooperate with women from other sectarian backgrounds among those women who have access to benefits through political elites. To the extent that women with access are more likely to be elites themselves, this could point to class divisions as a potential source of conflict among women or be a signal of strong norms of solidarity among women with similar socio-economic backgrounds.

I again draw on the public goods experiment data from Lebanon, taking advantage of the fact that men and women in that study also participated in groups that were either homogeneous or heterogeneous in their socio-economic class composition. I focus on evaluating cooperation by rich and poor women in mixed-class versus same-class group settings and contrast these results with the findings for all-male groups to highlight the uniqueness of the results for women. Given the evidence in the first essay, I anticipate that socio-economic class

cleavages between women represent one type of socially salient cross-cutting group identity that could impact the level of cooperation between women. Consistent with the results from the first essay, I find that women are not unconditional cooperators: the mixed-class group setting has a large and significant negative effect on cooperation among women. This result is contrasted with evidence of a positive effect of the mixed-class group setting on cooperation among men, confirming that gender intersects with class cleavages to affect behavior differently for men and women in the same social setting. The results contribute to a growing literature on within-gender group differences in cooperation and confirm that class cleavages can constitute a significant barrier to cooperation among women in some social settings.

### **1.2.3 Essay 3: Women candidates, electoral competition, and the incentive to prioritize women constituents**

In the first two essays I show how social differences among women may inhibit cooperation between women, as well as why it is important to think about why these results could be expected to differ for men and for women in the same setting. The main take-away in both of the first two essays is that cooperation between women to advance collective gains for women is conditional: it depends on the presence (or absence) of other meaningful social differences in group settings.

In the third essay, I consider how differences among women could moderate the effect of policies or institutions designed to improve outcomes for women as a whole. To this end, I focus on differences among women candidates competing for quota seats in Uganda. Frequently cited as a success story in terms of setting gender-based quota goals and actually reaching them, Uganda first established reserved seats for women in government in 1995. Yet, gains in gender equality have largely failed to live up to expectations. Despite the positive impact of increased descriptive representation for women on the adoption of gender-sensitive and gender-focused legislation, many researchers and activists recognize that the standards enumerated in these laws have yet to be fully realized ([Center for Women in Government and Civil Society Rockefeller et al., 2014](#)). After more than two decades of quota-driven representation for women in government, women's political empowerment has

improved while women's level of economic participation, rate of educational attainment, and key measures of health and survival have all declined relative to men ([The World Economic Forum, 2015](#)). Some argue that the lack of improvement is due to the cooptation of women's quota seats by political elites seeking to perpetuate a status quo system of client-patronage networks ([Tamale, 1999](#); [Ahikire, 2009](#); [Tripp, 2006](#)). This suggests that women candidates elected under this system may have interests that are more aligned with a largely male political elite than with women in the general population overall.

At the same time, politicians in Uganda face different degrees of electoral accountability depending on the extent to which political party leaders can effectively control the outcome of the electoral process. In less competitive party strongholds, party leaders may be more likely to support the candidacy of well-connected women who intend to uphold the political status quo. This creates strategic incentives for these women to cater to constituent groups linked to status quo distributions of access to political power, such as co-partisans, coethnics, or close friends and family. Greater competition for seats makes it harder for any one constituent group – such as political party elites – to control the outcome of the candidate selection process, creating different strategic incentives for women candidates to appeal to a broader range of constituents for the support needed to win election. This means that politically well-connected women candidates might differ in the electoral strategies they adopt depending on the level of electoral competition they face. To the extent that women candidates for quota reserved seats prioritize a more narrow set of clientelistic interest groups in their policy-making aspirations, this suggests that the introduction of quotas alone may not be sufficient to enhance the inclusion of historically marginalized groups in political decision-making on a broad scale.

I evaluate the extent to which the constituent groups women candidates plan to prioritize if elected varies with the competitiveness of the electoral environment using data from a non-random sample of 157 women candidates for office in 27 constituencies in Western Uganda. I find that women in non-competitive, party stronghold environments are significantly more likely to prioritize the needs and interests of more narrowly defined in-groups – such as political party agents, family and friends, and members of the same clan and same religion

– than are women in competitive areas. At the same time, the likelihood of intending to represent all members of the community significantly increases as competition increases, while the level of support for prioritizing women constituents remains fairly consistent across electoral settings. Importantly, I observe these differences even among women who are all generally well-connected to existing political networks. This suggests that institutional conditions can moderate the behavior of women candidates and alter the likelihood that elite women politicians will plan to act on behalf of the interests of a wider range of constituents.

### 1.3 CONTRIBUTION TO THE FIELD

On the whole, these essays seek to understand the conditions under which women can work together to realize the substantive outcomes that they care about. I show that social differences among women – especially differences between elite and non-elite women – affect the possibilities for the effective advancement of any collective interests held by women as members of the same gender group. In adopting this view, I am heavily influenced by research on intersectionality. In particular, I follow [Hancock \(2007, 250\)](#) in defining intersectionality as “a body of normative theory and empirical research that proceeds under six key assumptions.” For my purposes, I find the first four of these most relevant to my efforts in this dissertation, paraphrased as follows from [Hancock \(2007, 250\)](#): (1) multiple categories of difference have to be considered (e.g. gender and socio-economic class background); (2) the relationship among these categories is “an open empirical question” subject to investigation in every study context; (3) these categories are dynamic: mutable and malleable, constructed rather than given; and, (4) “each category of difference has within-group diversity that sheds light on the way we think of groups as actors in politics and on the potential outcomes of any particular political intervention.” My work reflects this emphasis on the importance of considering how multiple categories of difference can affect expectations of individual behavior depending on the broader institutional context in which these group categorizations take on meaning and impact behavior. As well, my attention specifically to how differences among

women affect behavior in groups and the prospects for collective action is related to the description of “intersectional knowledge projects” provided by [Collins \(2015, 14\)](#): “Individuals and groups differentially placed within intersecting systems of power have different points of view on their own and others’ experiences with complex social inequalities, typically advancing knowledge projects that reflect their social locations within power relations.” This is to say that my empirical investigation of cooperation among women is grounded in a desire to understand how differently situated women may be affected by the salience of these social differences with important implications for the outcomes of women’s engagement with one another across these divides.

While intersectionality has permeated the discourse in many social science disciplines, it has not yet reached in the mainstream in political science.<sup>1</sup> Still, there are a few examples of recent work on gender and identity politics that speak to the importance of how overlapping group memberships may intersect with one another in ways that influence behavior and alter expectations. The assumption that women will be united by their shared gender group membership is undermined by evidence that this may not always be the case given the presence of other, cross-cutting social differences. For example, in her work on identity and political behavior in the United States, [Klar \(2018\)](#) demonstrates that women vary considerably in how they interpret the norms of appropriate social behavior linked to their gender identity depending on their membership in different partisan groups. Rather than increasing willingness to work together, raising the salience of a common gender identity among women who perceive that identity as proscribing very different values and norms of behavior can serve to deepen divisions among women rather than bring them closer together.

Despite these recent efforts, we still do not know enough about how within-group differences can affect behavior and cooperative behavior in particular. In their review, [Balliet et al. \(2011\)](#) find very few studies that present results for in-group versus out-group cooperation outcomes by gender, calling for more experimental work that explores this relationship in social dilemma settings. [Balliet et al. \(2011\)](#) point out that existing theoretical work integrating evolutionary and socio-cultural perspectives predicts sex differences in cooperation

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<sup>1</sup>Ange-Marie Hancock, cited above, is one of a few notable exceptions. Also see [Hughes \(2011\)](#) for an example of cross-national empirical work in political science that draws on theories of intersectionality.



in these settings ([Van Vugt, Cremer and Janssen, 2007](#)), but little empirical work exists evaluating these existing expectations. In her ground-breaking work on gender similarities (as opposed to differences), [Hyde \(2014\)](#) echoes [Balliet et al. \(2011\)](#) in noting that very few meta-analyses consider gender differences in light of other moderating factors, in particular ethnicity or social class. She acknowledges the difficulties associated with making broad generalizations based on evidence from these kinds of studies, but argues that there is potentially much more to learn from taking an intersectional approach where the effects of the interaction between gender and ethnicity as well as gender and social class are also evaluated ([Hyde, 2014](#), 392-393).

My research aims to address this gap in the empirical literature in political science and showcase the importance of taking seriously the insights of theories of intersectionality. Overall, my work highlights the importance of understanding how differences among women – particularly differences between elite and non-elite women – affect the advancement of women’s “collective interests.” In the concluding chapter, I elaborate on the implications of my findings for the development of policies that can more effectively address the problem of persistent gender inequality in political participation worldwide.

## 2.0 GENDER, COETHNIC FAVORITISM, AND COOPERATION IN GROUPS: EVIDENCE FROM A PUBLIC GOODS EXPERIMENT IN LEBANON

### 2.1 INTRODUCTION

It is widely believed that individuals cooperate less in mixed-ethnic than in homogeneous ethnic group settings.<sup>1</sup> In fact, relative to more homogeneous ethnic environments, heterogeneous ethnic environments are associated with a host of suboptimal outcomes due to the lack of cooperation across ethnic lines, including the under-provision of public goods (Alesina, Baqir and Easterly, 1999; Habyarimana et al., 2007), inefficient public spending (Salti and Chaaban, 2010), clientelism (Wantchekon, 2003), weak accountability (Pande, 2011), and political instability (Easterly and Levine, 1997). In the literature on ethnic politics, a prominent explanation for this preference for cooperating with coethnics is rooted in the politicization of ethnic identity, whereby the distribution of access to resources and services generally takes place along ethnic lines. The distributive context within groups reinforces the link between ethnic in-group membership and access to material benefits. In turn, more cohesive ethnic groups can better perform and out-compete less cohesive groups, leading to the development of stronger norms of cooperation within ethnic groups than across them. Association with more powerful social groups leads to additional psychological benefits for those who adhere to group norms and enjoy group membership, thereby reinforcing

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<sup>1</sup>I am indebted to Sami Atallah, Joanna Fayad, Zeina Hawa, and Zeina Helou for their tireless help with implementation. This project was made possible by funding that the Lebanese Center for Policy Studies (LCPS) received from the Embassy of Norway. It is covered under University of Pittsburgh IRB PRO15060167; the procedures for data collection and select portions of the analysis were pre-registered at [egap.org/registration/2208](https://egap.org/registration/2208).

patterns of behavior consistent with in-group favoritism.<sup>2</sup>

Yet, recent studies that use public goods experiments to evaluate the individual-level preferences for cooperating with coethnics over non-coethnics find mixed evidence of in-group favoritism. Where some public goods games implemented in ethnically divided societies find evidence of ethnic in-group favoritism in cooperation ([Habyarimana et al., 2007](#); [Hjort, 2014](#)), others do not find clear evidence of coethnic bias in group settings ([Berge et al., 2016](#); [Greig and Bohnet, 2009](#)). These mixed findings call into question the individual-level motivations for cooperating more with coethnics than non-coethnics, and suggest there could be important heterogeneous effects that merit further investigation. This is important to examine, since understanding how ethnic group membership intersects with other group identities to inform behavior could provide valuable insights into the conditions under which policies designed to enhance collective action across group lines will be most (or least) effective.

In this paper, we argue that there are good reasons to think that the material and psychological benefits explanations for ethnic in-group favoritism in cooperation could vary along gender lines. On the one hand, we expect patterns of cooperation along ethnic lines to be more pronounced for men because the material and psychological benefits for in-group cooperation are likely to be more pronounced for them. Research shows that in highly clientelistic societies where resources are distributed along ethnic lines, women are more likely than men to be denied access to these networks ([Benstead, 2016](#); [Beall, 2005](#); [Wantchekon, 2003](#)). Men are also more likely than women to be associated with strong norms of within-group cooperation in response to the presence of inter-group competition ([Van Vugt, Cremer and Janssen, 2007](#)). Thus, we largely expect men to cooperate less in mixed-ethnic than in same-ethnic groups in societies where ethnicity is a highly politicized group identity.

On the other hand, the expected patterns of cooperation among women are much less clear. Women may also cooperate less in mixed-ethnic groups owing to strong identification with their ethnic identity or in the event that they do have access to benefits through

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<sup>2</sup>The data for this essay comes from a coauthored project so I adopt the use of ‘we’ throughout. The design of the experiment was a collaborative effort between this author, Laura Paler (University of Pittsburgh), and Sami Atallah (Lebanese Center for Policy Studies). See [Paler, Marshall and Atallah \(2018\)](#) for an example of co-authored work that draws on other data collected during the experiment. The writing and analysis presented here is original and solo-authored in fulfillment of the requirements for the dissertation.

coethnic elites, mirroring what we expect to observe for men. Alternatively, women may, on average, respond less negatively to the mixed-ethnic group context when it comes to cooperation because fewer women (relative to men) have experience benefiting from coethnic networks when it comes to accessing the material benefits of in-group favoritism in social settings. Moreover, recent evidence suggests that women (unlike men) may be subject to the cross-cutting influence of gender group membership, which could introduce norms of cooperation in single-gender group settings with the potential to counteract norms of ethnic in-group favoritism. In fact, several recent experiments involving public goods provision and group-based problem-solving in ethnically divided societies (including Liberia, Kenya, and Tanzania) find that women are more cooperative and better able to address shared challenges in single-gender groups (rather than mixed-gender groups) (Greig and Bohnet, 2009; Berge, Juniwyat and Sekei, 2016). Moreover, Fearon and Humphreys (2017) find that women (unlike men) tend to be unconditionally cooperative in single-gender group settings (Fearon and Humphreys, 2017), choosing to contribute to the provision of public goods without regard for the individual costs or benefits of doing so (or failing to do so). In other words, we find there are reasons to suspect that women may not respond negatively to the mixed-ethnic group setting when it comes to cooperation with other women, though this could depend on several factors.

We evaluate whether ethnic in-group favoritism varies among men and women and whether this depends on access to benefits through coethnic elites, attachment to sectarian identity, or attachment to gender identity. We test our expectations using data collected during a public goods experiment implemented with 120 single-gender groups in Lebanon where individuals were randomly assigned to participate in either a homogeneous (same-sect) or a heterogeneous (mixed-sect) group. We find that, on average, women do not respond as negatively to the mixed-ethnic group treatment as men do, though this result is not statistically significant at conventional levels. However, we do find that women with access to material benefits through coethnic elites are more likely to demonstrate coethnic bias in cooperation than women without access, paralleling the behavior of men in our sample. At the same time, strong attachment to ethnic identity does not explain coethnic bias among women in the same way that it does for men. Among men, strong ethnic identification rein-

forces coethnic bias in cooperation, whereas we observe no evidence of the same effect among women in single-gender group settings. Finally, we examine how strength of attachment to gender identity influences cooperation. We find some evidence that weak attachment to gender identity among women is associated with greater willingness to cooperate in same-ethnic social settings, while women more attached to their gender identity are not negatively affected by the presence of non-coethnics in mixed-ethnic settings in the same way that women who weakly identify with their gender seem to be.

Our results point to the importance of considering how gender and ethnic identity intersect to inform behavior differently for women relative to men. The same underlying identity mechanism may operate very differently in each case with important implications for understanding the potential for relying on shared membership in cross-cutting groups – such as shared gender identity – as a way to build bridges and generate collective action across ethnic lines. Shared gender group membership may be more effective for building women’s collective action capacity among women who feel disadvantaged by the system of ethnic parties than among women who benefit from the ethnic status quo. On the whole, our findings suggest that future research needs to consider within-group differences in preferences for coethnic politics and coethnic bias in collective action since it may be that coethnic favoritism is more entrenched only among those elite women with access to benefits, and not necessarily among women without access to similar resources through coethnic elite channels. We return to this discussion in the conclusion.

## **2.2 COOPERATION IN ETHNICALLY DIVIDED SOCIETIES**

### **2.2.1 Explaining ethnic in-group favoritism in cooperation**

Broadly speaking, cooperation dilemmas refer to social scenarios in which individuals recognize that some jointly beneficial outcome exists that can only be achieved through costly coordination of effort whereby each person has to decide whether to pay some individual cost

in order to help achieve a larger benefit that will then be enjoyed by all (Everett, Faber and Crockett, 2015). In societies where ethnicity is particularly salient, cooperation is thought to be more difficult because of a tendency toward in-group favoritism, or “the tendency to favor members of one’s own group over those in other groups” (Everett, Faber and Crockett, 2015, 1). However, there is still some ambiguity regarding the extent to which in-group favoritism is driven more by concern for the well-being of in-group members (Koopmans and Rebers, 2009; Balliet, Wu and Dreu, 2014), or more variation in the expectations individuals have of in-group and out-group members’ behavior in social settings (Everett, Faber and Crockett, 2015). Nonetheless, it is widely believed that – in ethnically divided societies – people cooperate less in mixed-ethnic than in same-ethnic groups.

Yet, while there is ample empirical evidence of comparatively better outcomes in ethnically homogeneous environments than in ethnically heterogeneous ones, the experimental evidence of individual-level preferences for cooperating in mixed-ethnic versus same-ethnic group settings is somewhat mixed. While some findings support the belief that individuals prefer cooperating with coethnics over non-coethnics (Hjort, 2014; Habyarimana et al., 2007), other experiments fail to find support for this expectation (Berge et al., 2016; Fearon and Humphreys, 2017). Despite the lack of consensus in the results, several prominent strands of literature speak to the mechanisms thought to drive individuals to cooperate more when grouped with coethnics, namely: (1) concerns about access to material benefits through co-ethnic networks, and (2) expectations of psychological benefits associated with adhering to ethnic in-group norms.

Distributive conflict in divided societies is often based on ethnicity, so coethnics have evolved norms and expectations of behavior that facilitate cooperation among coethnics and reduce the incentives for cooperation with non-coethnics. For instance, in societies where ethnicity is highly politicized, politicians are known to target investment in public goods to places where their coethnics are more concentrated (more ethnically homogeneous areas) rather than mixed-ethnic areas (Ejdemyr, Kramon and Robinson, 2018). By invoking shared ethnic group identity, coethnic elites can build larger coalitions uniting otherwise diverse individual interests; in turn, this larger network can be leveraged to press for a greater share

of control over resources where in-group members stand to gain from the success of the group as a whole (Posner, 2017, 2004). As more resources are made available to coethnic political elites, this means more goods are potentially available for redistribution to coethnic constituents. In some cases, political elites reinforce this link by distributing material benefits directly to their coethnic supporters (e.g. in the form of cash handouts or local community improvements) (Corstange, 2016). In others, political elites use access to political institutions to redirect the flow of state resources towards coethnic beneficiaries (Burgess et al., 2015; Franck and Rainer, 2012). Research on elections in mixed-ethnic settings shows that some people support coethnic candidates precisely because they believe those candidates represent their best chance to gain access to direct material benefits (Wantchekon, 2003). Elite-driven distributive politics along ethnic lines thus provides a plausible explanation for why some individuals may be more likely to show coethnic favoritism under certain conditions. Indeed, recent experimental evidence from a study of inter-ethnic group cooperation in Lebanon indicates that the persistence of clientelistic vote-buying by political elites reinforces norms of in-group favoritism in cooperation for instrumental reasons (Chang and Peisakhin, 2019). In other words, greater cooperation in same-ethnic than in mixed-ethnic groups could be motivated by a desire to benefit from the distribution of material resources along ethnic lines.

At the same time, the material benefits logic of ethnic in-group favoritism is not only about access to resources through coethnic elites; it is also about trust and expectations of others' willingness to cooperate. Research on human evolution shows that group-based competition over resources creates incentives for cooperative norms to be rewarded within groups more so than across groups, since more cooperative groups are better able to compete against and out-perform others (Raihani and Bshary, 2015). These norms may be fostered by the development of stronger mechanisms for identifying and rewarding cooperators while locating and punishing non-cooperators (Koopmans and Rebers, 2009), as well as by the existence of shared technologies of communication within ethnic groups that propagate norms of cooperation and make it easier to coordinate efforts within groups than across them (Berge et al., 2016). The emergence of strong norms of cooperation within ethnic groups may contribute to the development of more positive beliefs that others in same-ethnic group settings

will cooperate, while increasing the relative uncertainty surrounding others' willingness to cooperate in mixed-ethnic settings where the same norms and expectations of behavior do not necessarily exist.

Given the vast array of evidence that people tend to cooperate based on expectations that others will do so ([Fischbacher, Gächter and Fehr, 2001](#)), this introduces the possibility that mixed-ethnic settings will be more likely to trigger uncertainty and distrust compared to same-ethnic settings. In fact, this is largely what [Tusicsny \(2017\)](#) shows in his study of reciprocity and discrimination across ethnic lines in India. His experimental results suggest that it is uncertainty about the cooperative behavior of non-coethnics that inhibits interactions in mixed-group settings; given similar expectations of coethnic and non-coethnic contributions to a public good, individuals cooperate at similar levels in mixed-ethnic settings as they do in homogeneous ethnic settings ([Tusicsny, 2017](#)). Similarly, recent evidence from a series of experiments in Kenya suggests that lower levels of cooperation in mixed-ethnic compared to same-ethnic group settings could be driven more by uncertainty in the heterogeneous setting than by an explicit preference for cooperating with coethnics over non-coethnics ([Berge et al., 2016](#)). It is more likely that individuals with heterogeneous backgrounds face greater uncertainty regarding the norms and values that govern other individuals' decision-making processes ([Fehr and Hoff, 2011](#)). At the same time, the dense structure of coethnic networks makes it easier to monitor and enforce these norms ([Habyarimana et al., 2009](#); [Miguel and Gugerty, 2005](#)), and raise the cost of shirking the responsibility to contribute to public goods that will benefit other in-group members ([Galbraith, Rodriguez and Stiles, 2007](#)). This heightened threat of sanctioning for failure to cooperate reduces the probability that non-cooperators will emerge in coethnic interactions, as shown by [Habyarimana et al. \(2007\)](#) in a series of public goods experiments implemented in Uganda. This makes it easier for individuals to choose cooperation in coethnic settings than in mixed-ethnic settings because shared in-group norms of cooperation reduce uncertainty regarding the contributions of others.

Moreover, conditional cooperation and trust are positively correlated, where individuals are more likely to cooperate when they trust in others and have positive expectations that



others will also cooperate (Kocher et al., 2015). In fact, Chang and Peisakhin (2019) demonstrate that more positive expectations of the willingness of non-coethnics to cooperate likely depends on increasing the level of inter-ethnic group trust. This is important since research shows that in situations where the outcome of cooperation is interdependent – as in a public goods experiment – then the salience of differences among group members could heighten awareness about the relative absence of mutual trust that would be present if all shared membership in the same socially salient group (Brewer, 2000). In other words, perceptions of trust and expectations that others will cooperate are thought to be higher in same-ethnic compared to mixed-ethnic group settings. This is all the more important in a competitive context where access to resources puts groups in conflict with one another and heightens awareness of the incentives that reward in-group cooperation over out-group cooperation.

Distributive conflict is also linked to in-group favoritism and out-group prejudice such that there are psychological benefits when one’s own group does better and non-coethnics do worse. One prominent set of explanations for this emerges from the literature on evolutionary social psychology. In this view, strong norms within socially salient groups develop over time to favor cooperation with in-group members over out-group members since more cooperative groups stand to be better able to compete against less cohesive groups for control over the distribution of valuable resources (Boyd and Richerson, 2009). Increased norms of prosocial cooperation within groups can be magnified by a recent history of conflict between groups in society (Raihani and Bshary, 2015). In fact, other evidence demonstrates that ethnocentrism – defined as in-group favoritism rather than out-group hostility – is useful for sustaining cooperation even in the absence of “continuing interactions, well-developed institutions, and strong social norms” because of the utility of cooperating with similar others in competitive environments (Hammond and Axelrod, 2006). To the extent that ethnic groups are one potentially socially salient group type that can be politicized and used to mobilize individuals in pursuit of group gains, then we should expect strong norms of in-group favoritism to emerge in ethnically divided societies. Much of the research in social psychology shows that discrimination against out-groups may be driven more by positive feelings of favoritism towards fellow in-group members than by a desire to harm members of other groups (Brewer 2000). Indeed, a wealth of evidence in the field of social identity theory demonstrates

that individuals can experience very real psychological benefits – such as enhanced self-esteem – from prioritizing fellow in-group members over out-group members (Tajfel, 1982; Hewstone, Rubin and Willis, 2002). One important modifier in the literature on intergroup bias stipulates that these psychological benefits of in-group bias may only apply to those individuals who strongly identify as a member of the social group in question (Hewstone, Rubin and Willis, 2002). This suggests that we should expect the negative effect of the mixed-sect group on cooperation to be strongest for those who more strongly identify with their ethnic identity than for those who do not identify as strongly with their ethnic identity.

### 2.2.2 Gender as a potential intervening factor

On the whole then, the literature suggests that cooperation will be higher in mixed-ethnic than in same-ethnic groups owing to the greater material and psychological benefits associated with cooperating in coethnic settings relative to mixed-ethnic settings. Yet, the literature on cooperation in ethnically divided societies raises important questions about whether both men and women will necessarily cooperate less in mixed-ethnic groups (compared to homogeneous ethnic groups). This is important to investigate because research shows that men and women may be subject to different norms of cooperation within group settings. Some research employing public goods experiments to study cooperation in groups shows that all-male groups tend to be more cooperative than all-women groups (Brown-Kruse and Hummels, 1993), while other evidence shows women are more cooperative than men in group settings (Nowell and Tinkler, 1994). More recent efforts to investigate gender differences in group-based cooperation find that men and women do respond differently to features of the cooperation environment, such as the framing of the decision to cooperate (Fujimoto and Park, 2010; Brañas-Garza et al., 2010), the composition of the group (Balliet, Wu and Dreu, 2014; Yamagishi and Mifune, 2009), and whether cooperation decisions are observable to other in-group members (Charness and Rustichini, 2011). This lack of consensus indicates that there may be important heterogeneity in how individuals respond to the cooperative context. Yet, the intersection of gender and ethnicity remains a relatively understudied area of individual behavior in group settings (Hyde, 2014). We follow Hyde (2014) and Balliet

et al. (2011) in investigating whether men and women differ in their willingness to cooperate in mixed-ethnic compared to same-ethnic group environments and find that there are good reasons to anticipate gender-based variation in response to the mixed-ethnic group setting given the literature on in-group favoritism reviewed above.

First, we anticipate that men will cooperate less in mixed-ethnic settings because the material and psychological benefits of coethnic cooperation are most acute for them, in line with what much of the literature on ethnic in-group favoritism predicts. In terms of material rewards associated with cooperation in coethnic settings, there is ample empirical evidence that in ethnically divided societies men (more so than women) tend to favor coethnic political candidates who offer access to clientelistic benefits in exchange for political support (Wantchekon, 2003). In terms of the psychological benefits of adhering to in-group norms of cooperation with coethnics, there is some evidence in the literature on social dominance theory that men (more so than women) tend to hold attitudes that correlate with a social dominance orientation – that is “a strong desire to promote intergroup hierarchies and for their in-groups to dominate their out-groups” – such as “nonegalitarian political and social attitudes, including sexism, racism, chauvinism, patriotism, and nationalism” (Hewstone, Rubin and Willis, 2002, 583). In other words, norms of inter-group bias could differ between men and women, with men perceiving a stronger pull toward norms of in-group favoritism in group settings than women, and perhaps especially so in the case of ethnic group identity which can be highly politicized.

In contrast, it is much less clear how women will react given the same scenario. In terms of showing ethnic in-group favoritism due to an underlying material benefits motivation, it is not obvious that as many women as men would be influenced by such a factor given the extensive empirical evidence of women’s systematic exclusion from clientelistic networks in highly patriarchal societies (Benstead, 2016; Tripp, 2001; Goetz, 2007). Clientelism, or the practice of selectively distributing benefits in exchange for political support, is frequently associated with ethnic politics and gender disparity in access to these networks is well-documented.<sup>3</sup> In many cases, women are systematically excluded from accessing political

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<sup>3</sup>Clientelism can take place in any political system where elites reward their supporters in a selective fashion. This could take the form of political party favoritism, union favoritism, religious group favoritism, or any

networks and decision-making regarding public resources because the behavior necessary to penetrate these networks would be socially unacceptable for women (Goetz, 2007). Not only are women frequently denied opportunities to benefit from coethnic political networks in the same material sense as men, additional evidence suggests that women may have different political preferences as a result. For example, in his study of clientelism and voting in Benin, Wantchekon (2003) finds that women are more likely than men to vote for candidates who represent programmatic policy platforms (often specifying community-level reforms) than candidates who promise to provide direct individual benefits in exchange for support. Wantchekon (2003) suggests this could reflect the reality that redistribution of resources to supporters is less likely to benefit women than it is to benefit men. To the extent that women, in general, benefit less than men from coethnic clientelistic networks for access to goods and benefits, there is less reason to anticipate that women would more strongly associate coethnic favoritism with access to material rewards (at least when compared with non-coethnic settings). At the same time, this also implies that, conditional on having access to benefits through coethnic elites, women could behave more like men and cooperate less in mixed-ethnic group scenarios. In other words, we might observe a relatively smaller negative effect of the mixed-ethnic group setting on cooperation among women than among men because a relatively smaller proportion of women actually benefit from access to resources through coethnic elites compared to men. If we examine the subgroups of women and men with access versus those without, we might observe similar patterns of behavior among politically well-connected men and women.

In terms of the psychological benefits associated with in-group favoritism in group settings, important research in social psychology and political economy leads us to anticipate that women may behave differently in mixed-ethnic settings that consist of all women owing to the increased salience of shared gender group membership. According to social psychology theories of social roles, women face strong norms of pro-sociality and interdependence in group settings that differ from the norms of independence and competition linked to men (Eagly and Wood, 1999). This means that, by virtue of the role they play in many societies,

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other practice where elites selectively provide benefits to particular individuals or communities on the basis of their political alignment rather than on the basis of need.

women are conditioned to favor cooperation with similar others. Recent empirical evidence substantiates this argument, as several studies find that women tend to cooperate more in single-gender groups than mixed-gender groups and more so than men in single-gender groups (Fearon and Humphreys, 2017; Berge, Juniwyty and Sekei, 2016; Greig and Bohnet, 2009). Moreover, Fearon and Humphreys (2017) find that women cooperate with one another regardless of the anticipated material costs or benefits associated with doing so. This suggests that there could be an underlying norm of cooperation among women rooted in shared gender identity.

This is important because it suggests that stronger attachment to gender identity among women could counteract any psychological benefits associated with in-group cooperation on the basis of shared ethnic group identity. This would be consistent with evidence that perceiving members of social out-groups – such as non-coethnics – as sharing membership with the individual in another salient social group – such as gender – could reduce bias in behavior by activating norms of in-group favoritism linked to shared membership in a cross-cutting group, or by increasing perceptions of shared trust on the basis of shared group membership (Brewer, 2000; Mutz, 2002; Brewer, 1996). To the extent that shared gender identity is magnified in all-women groups, we might expect this to raise expectations that others in the group will cooperate despite the presence of ethnic cleavages in mixed-ethnic contexts. Some evidence from ethnically mixed societies shows that given similar expectations of coethnics’ and non-coethnics’ willingness to cooperate, the existence of coethnic bias in cooperation is far less assured (Tusicsisny, 2017). If shared gender group membership enhances positive expectations of non-coethnics, then we should observe a smaller negative effect of the mixed-sect treatment on cooperation among women than we observe among men, though this could depend on both strength of attachment to gender identity and strength of attachment to ethnic identity. Women with a strong attachment to their ethnic group may behave similarly to men in terms of showing in-group favoritism in cooperation, while it may be that only women with a strong sense of attachment to their gender identity are willing to cooperate across ethnic lines.

To shed light on these differences, we investigate the effects of mixed-ethnic cooperation

separately for women and for men. Moreover, we seek to understand how the effects of group composition vary for different subsets of the population, such as among those who are more/less connected to coethnic elites, more/less attached to their ethnic group identity, and more/less attached to their gender identity. We predict that men overall will cooperate less in mixed-ethnic than in same-ethnic groups, consistent with the literature on the material and psychological benefits of ethnic in-group favoritism. In contrast, we expect that the negative effect of the mixed-ethnic group setting on cooperation among women could depend on having access to material benefits through coethnic elites, feeling a relatively strong attachment to sectarian identity, or feeling a relatively weak attachment to gender identity. Given that we predict women, on average, are less likely to have access to benefits through coethnic networks than men and are relatively more likely than men to face strong norms of cooperation on the basis of shared gender group identity, we expect the mixed-ethnic group setting to have either no effect or a smaller negative effect on cooperation among women than it will on men.

## 2.3 RESEARCH DESIGN

We evaluate these expectations using data collected for a larger project in Lebanon that examines how discussion across sectarian lines influences support for interest-based politics as opposed to the sectarian-based political status quo. Through this project, we have access to unique data on cooperation in single-gender groups where participants were randomly assigned to participate in a public goods game exercise with individuals from their same ethnic background or from different ethnic backgrounds. Our pre-registered study design called for all single-gender groups which allows us to look specifically at how cooperation among women and men varies in the presence of socially salient ethnic cleavages compared to when all individuals come from the same ethnic group. Data collected via pre-treatment survey instruments allow us to investigate whether in-group favoritism in cooperation is more likely for particular subgroups, including those with access to material benefits through

coethnic elites and those more strongly attached to their ethnic identity. We also evaluate the influence of strong attachment to gender identity on cooperation among women and compare this to what we observe for men, adding context to how we interpret our results. While we did not pre-register our intention to analyze the data by disaggregating it into women’s groups and men’s groups for separate consideration, we believe there are important outstanding questions in the literature on ethnic politics and critical assumptions about the underlying motivation for coethnic favoritism in cooperation that justify the use of our data for exploratory analysis in these areas. In this section, we describe the Lebanese context with respect to the literature we seek to address, our procedures for recruitment into the study and random assignment to treatment groups, various instruments used for data collection, the results of a randomization check, important descriptive evidence of differences between the women and men in our study sample, the procedure for exposing participants to the group composition treatment, and the design of the public goods game.

### **2.3.1 The Lebanese context**

Lebanon is an excellent country case for testing how gender intersects with ethnic group cleavages to influence collective action capacity for at least three main reasons: (1) the salience of highly politicized ethnic identities; (2) the pervasive and strong link between ethnic group membership and access to clientelistic benefits through coethnic elites; and, (3) the relatively high levels of inequality between men and women in the society that negatively impact women’s political, economic, and social autonomy regardless of ethnic group membership.

Apart from national identity, sectarian identity (or, ethnicity) is arguably the most salient group identity category in Lebanon.<sup>4</sup> As a consociational democracy with political power distributed evenly across the three major sects in Lebanon (Christians, Sunnis, and Shia), all

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<sup>4</sup>We use the terms ‘ethnic group’ and ‘sectarian group’ and all of their derivatives as interchangeable throughout, though we acknowledge that there are distinctions between the terms outside of the Lebanese context. For our purposes, ethnic group membership and sectarian group membership are synonymous in a context where cosectarian networks dominate social life and influence behavior in group settings in much the same way that coethnic ties do in other settings where goods and services are distributed along ethnic lines by coethnic leaders.

political decision-making and political participation in the country flows through membership in sectarian political groups. The Ta'if Agreement of 1989 that ended Lebanon's 25-year long civil war effectively entrenched the politics of ethnic group membership by creating sectarian quotas for top civil service positions and for seats in the legislature, in addition to mandating that the office of President be held by a Christian, the office of Prime Minister by a Sunni, and the position of Speaker by a Shia.<sup>5</sup>

In practice, this means that access to resources often flows through membership in sectarian political groups, where access to resources and economic opportunities often depends on the strength of coethnic networks (Corstange, 2016). It is not uncommon for individuals to promise votes to cosectarian politicians in exchange for material benefits (Corstange, 2016). In-group bias in hiring practices is also rampant, with economic opportunities sometimes dependent on high-level connections within sectarian political groups. At the same time, politicians count on the support of their coethnics to maintain their position within the broader political system, not infrequently prioritizing the delivery of public goods and services to areas more densely populated by cosectarians.

However, these gains from participation in cosectarian networks within an ethnic political system are not obviously shared by men and women to the same extent. For one thing, direct access to political decision-making as an elected sectarian representative with influence over the distribution of state resources is highly gendered. Men dominate the upper ranks of political and religious leadership in Lebanon, with women holding just 4 out of 128 seats in the National Assembly and less than 5 percent of the seats in local assemblies (Hussein, 2017). The sectarian quota system of representation does not include any provisions to guarantee the representation of women and efforts to introduce a quota for women's representation at the national level, though ongoing, have been unsuccessful (Aziz, 2017). If anything, the overlapping norms of religious and political practice make it more difficult for women to participate in the sectarian political system. Of the four women currently serving in Parliament, three are from Christian sects and one is Sunni. All four women come from

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<sup>5</sup>Lebanon has 18 officially recognized sects. While no census has been conducted since 1932, a recent study suggests that 27 percent of the population is Sunni, 27 percent is Shia, and 21 percent is Maronite Christian, with the rest of the population belonging to smaller groups ( <http://www.globalsecurity.org/military/world/lebanon/religious-sects.htm>).



highly influential political families with male relatives who previously served in national office. This suggests that while sectarian power-sharing ensures that men from all major sects have representation and an opportunity to influence the distribution of Lebanon's material goods and services through cosectarian networks, women participate in this system largely indirectly.

Not only are women largely excluded from direct access to political decision-making, available evidence suggests that women do not benefit from coethnic networks or links to coethnic elites to the same extent that men do. For example, evidence shows that cosectarian bias exists in workplace opportunities and business transactions in Lebanon, yet institutional barriers may prevent women from accessing these material benefits in the same way as men (Akeel, 2009). In effect, this limits the availability of economic opportunities as material benefits for women, potentially making it less likely that women will associate coethnic favoritism with access to material incentives. Given that this is one of the most frequently cited and tangible benefits cosectarians receive in exchange for their allegiance to in-group elites (Corstange, 2016), this difference between men and women is especially notable.

Moreover, there may be additional costs to maintaining the sectarian status quo that are disproportionately visited on women. In many ways, gender inequality in Lebanon is thought to persist in part as a byproduct of the sectarian division of power. There is no civil code allowing for personal status recognition before the law that is independent of religious affiliation. The lack of a civil code means that all political, social, and economic rights are funneled through various interpretations of the legal system depending on sectarian group membership, amounting to 15 different personal status laws active across 18 religious communities operating under parallel systems of religious courts (Geagea and Fakhri, 2015, 116): "This multiplicity of laws means that Lebanese citizens are treated differently when it comes to key aspects of their lives, such as marriage, divorce, and children." The effect of this sectarian legal structure is much more limiting for women than it is for men. In interviews and surveys conducted by Human Rights Watch, it is clear that men have much greater flexibility within the sectarian system. For example, men can change their sectarian affiliation to facilitate remarriage without first securing a divorce, or manipulate religious

norms to avoid making economic concessions to ex-wives (Geagea and Fakh, 2015). The freedom women have to initiate divorce proceedings, claim marital assets, or secure custody of children varies by sect along with the associated sectarian personal status laws. This means that the sectarian political system creates an environment where women’s access to legal rights varies widely by sectarian group membership, a condition that is not as severe for men.

In other words, not only does sectarian politics translate to greater material gains for men than for women, the cost of maintaining the system visits unique burdens on women across sectarian groups. This suggests that there are few reasons to suspect women would associate coethnic favoritism in cooperation with access to greater material or psychological benefits. This is the reality for women from all sectarian groups, which suggests that Lebanon could be an excellent case for understanding the trade-off between the strength of ethnic identification (as it is connected to material benefits through coethnic cooperation) and the strength of identification with other women on the basis of shared gender identity (which puts women in a unique situation relative to men). On the whole, this creates an ideal setting in which to evaluate gender-based variation in coethnic bias as a function of the underlying influence of access to material benefits through coethnic elites, but also as a function of the mediating effects of attachment to ethnic identity and gender identity. These factors could reinforce coethnic bias in cooperation (as we expect with strength of attachment to sectarian identity), or create bridges across ethnic groups that facilitate cooperation in mixed-ethnic settings (as we expect in the case of attachment to gender identity).

### **2.3.2 Recruitment and random assignment to treatment groups**

To examine how cooperation among women varies in different ethnic settings, we draw on data that we collected during 120 group interactions among strangers organized in Beirut between February and April 2016. These 120 groups consisted of participants who were recruited by a professional Lebanese firm and randomly assigned by us to participate in either homogeneous or heterogeneous small group discussions. In accordance with our pre-registered design, these 120 groups were all single-gender and consisted of 48 all-women

groups and 72 all-men groups. Prior to the start of these discussions, participants completed a screening survey (to facilitate recruitment), a pre-treatment survey, and one round of a public goods game designed to measure willingness to cooperate with each other knowing only the sect and gender composition of the group.<sup>6</sup> We take advantage of the data collected during this public goods game exercise to explore cooperation among women across ethnic lines, comparing our findings to what we observe for men subjected to the same group composition treatment.

We worked with a professional Lebanese firm to develop a protocol for recruiting subjects into our experiment who varied in terms of their gender, socio-economic class background, neighborhood, and sectarian group (i.e. ethnic background). The firm hired 27 professional recruiters from various neighborhoods and demographic profiles to locate individuals for the study that varied in their socio-economic and sectarian background. The recruiters were not aware that eligible participants would be randomly assigned to participate in discussion groups that systematically varied in their sectarian composition. They had no knowledge of the study procedures or motivation beyond the desire to understand how people feel about economic, political, and social issues in Lebanon. After approaching a prospective study participant, each recruiter would go through an informed consent script before completing a screening survey questionnaire with the individual. These surveys were compiled into a dataset where we identified eligible individuals according to the targets needed to achieve a study sample that would be balanced across Christian, Shia, and Sunni sectarian profiles. All participants were recruited from the Beirut and Mount Lebanon areas and randomly assigned to participate in either homogeneous groups (all six participants shared the same sectarian background) or heterogeneous groups (two Christians, two Shia, and two Sunnis). Overall, our randomization resulted in 60 homogeneous and 60 heterogeneous ethnic groups involving a total of 720 participants, of which 713 completed the study. This included 285 women and 428 men.<sup>7</sup>

The 120 groups were organized in five blocks of 24 group sessions, with 12 homogeneous

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<sup>6</sup>In addition to the ethnic composition of the group, participants were made aware of the socio-economic class composition of the group. We explore the impact of this economic class cleavage in the next dissertation essay.

<sup>7</sup>Additional details on the recruitment procedures can be located in Appendix D.

and 12 heterogeneous ethnic groups per block. Participants were recruited by the professional firm for one discussion block at a time with recruiters using screening surveys to identify eligible participants. Once eligibility and willingness to participate were confirmed, each recruit was randomly assigned to a discussion group type, further blocking on sect and class. One set of discussions was completed every 2-3 weeks between February and April 2016. We completed two sets (48 groups) with women and three sets (72 groups) with men. This allows us to look specifically at how cooperation varies among women and among men in group settings. The sets were implemented in alternating fashion between all-men and all-women groups to help minimize the possibility that any observational differences between men and women (or within either group) in the results could be driven by the intervention of a particular event in time.<sup>8</sup>

### 2.3.3 Potential selection issues and randomization checks

To meet the target of 720 participants in 120 groups, we recruited a total of 1200 individuals (720 participants and 480 back-ups). To obtain the goal of 1200 individuals, we recruited 40 individuals for each set of the five blocks. We block randomized individuals by profile type and discussion block with the goal of obtaining 24 participants and 16 extras for each discussion block.<sup>9</sup> For each group session, we over-recruited by 50 percent for each profile to make sure that we would have the correct group composition for the scheduled session. Upon arrival at their scheduled discussion session, participants were checked in by staff and informed consent was administered. Participants were not designated as ‘main’ or ‘backup’ in advance. If extra participants arrived, those that were asked to stay were randomly selected. This was essential to ensure that those who participated in each discussion were a random sample of those who were assigned to that treatment condition. We asked our implementing partner to schedule the discussions such that every person in the pool would show up at one discussion in accordance with their treatment assignment, ensuring that we always had

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<sup>8</sup>Additional details on our design and randomization are provided in Appendix D.

<sup>9</sup>Additional information on the six profile types needed for each set of discussion groups is provided in Appendix D, along with a more detailed description of the potential for selection into participation to bias our estimates of cooperation.

more individuals than necessary of each profile type at each session. The implementing partner was then supposed to randomly select (for each profile type) who would actually stay to participate and who would be asked to go home (after receiving compensation) or be invited to a different session. In actuality, however, the partner typically ended up getting only the target number of participants to show up for each discussion, which introduced the possibility that there was some differential selection into who ended up participating in the public goods game.

The main concern here is that selection into participation could have introduced imbalances in pre-treatment characteristics for individuals in treatment (mixed-ethnic) and control (same-ethnic) groups. To help address this potential issue, we draw on data collected from a pre-treatment survey that participants filled out after arriving to the study site and before learning the composition of their group and playing the public goods game. Alongside the data from the screening survey, this pre-survey allows us to evaluate the effectiveness of our randomization protocol, as well as test for significant differences in our sample on key covariates, such as gender. Table 9 (Appendix A) shows that random assignment to mixed-ethnic and same-ethnic treatment groups was effective, as nearly all of the potential confounding characteristics of individuals are distributed evenly across treatment conditions within the full sample (713 observations) as well as within the women’s subsample (285 observations, see Table 10) and within the men’s subsample (428 observations, see Table 11). This increases our confidence that any cause for concern is negligible. We nevertheless include control variables in our main analysis to correct for any imbalances in observable pre-treatment covariates.

### 2.3.4 Descriptive evidence of gender differences in the sample

Since participant gender is obviously not randomly assigned, our estimation strategy relies on using controls for any potential confounding variables to prevent omitted variable bias from affecting our inferences.<sup>10</sup> At the same time, our exploratory analysis of the available data

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<sup>10</sup>We discuss this more in describing our estimation strategy in Section 2.4.2 below. Summary statistics for all individuals in our sample, disaggregated by gender, are available in Appendix B.

is motivated by the belief that certain factors correlated with gender may help explain why women and men could differ in their proclivity for demonstrating coethnic bias in cooperation in ethnically divided societies. To further ground this initial assumption, we briefly review the summary statistics for our sample, drawing on pre-treatment survey data collected from the women and men who participated in our study. In general, this data shows that there are trends in access to coethnic elites, attachment to sectarian identity, the relative salience of other social identities, and other additional factors that would be expected to vary by gender in a society where men and women are as unequal as they are in Lebanon.

First, we do observe significant differences between the men and women in our sample in terms of accessibility and connectedness to sectarian leaders. Women in our sample are significantly less likely than men to report having access to benefits through either politicians/Za'im (mean of 1.69 versus 2.00) or religious leaders (mean of 1.98 versus 2.20). Second, we see suggestive evidence of gender differences in the salience of sectarian identity. The index for strength of attachment to sectarian identity reveals that women in our sample are more strongly sectarian than men (mean of 0.09 versus -0.07). This could be driven predominantly by women being less willing to change their sectarian affiliation (mean of 3.52 versus 3.34), a prominent component of the sectarian identity index measure.<sup>11</sup> However, we also note that women express significantly more discomfort than men with marrying someone from another sect (2.52 versus 2.08), discussing political issues with people from other sects (2.18 versus 1.93), and discussing social or economic issues with people from other sects (1.70 versus 1.57). These differences contribute to the significant gender gap in prejudice against members of other sectarian groups which is stronger for women than men in our sample (0.15 versus -0.11). These descriptive statistics suggest that attachment to sectarian identity is quite strong among women despite the relative lack of evidence that women have access to material benefits through coethnic elites. Third, in terms of strength of attachment to other social identities, women more strongly identify with their gender identity than men in our sample (5.38 versus 4.88). This supports our contention that gender identity may be more salient for women than for men because of the additional layer of social exclusion

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<sup>11</sup>It is possible that this is related to the fact that while it is relatively easy for men to change their sectarian affiliation, the process is much more complicated for women since their legal standing varies more than men's as a function of their sectarian group membership, as noted in Section 2.3.1.

experienced by women on the basis of their gender group membership.

We also note that this observation coincides with differences between men and women that speak to the existence of gender inequality in Lebanese society more broadly. For instance, women in our sample more weakly identify with their occupational identity than men (4.26 versus 4.88), but this makes sense given that the majority of women in our sample work in the home (56%), while nearly all of the men are employed at least part-time outside of the home. The relatively high share of women engaged full-time in domestic labor may also help explain why women report more homogeneous social networks than men, with fewer family, friends, and acquaintances from other sectarian backgrounds (2.81 versus 2.56). Other significant differences between the men and women in our sample relate to educational attainment, which is also consistent with indicators of gender inequality overall. For instance, the men in our sample are more educated than the women, on average: 71% of men have completed some kind of post-secondary education compared to just 61% of women.

Coupled with the observation that women in our sample are also significantly less politically active than men, with fewer women than men having ever signed a petition (4% compared to 8%) or participated in a protest or demonstration (27% compared to 43%), these descriptive survey results reinforce the importance of understanding whether shared gender identity can be a force for cross-sectarian organizing among women. Given that we observe relatively low levels of political action among women but a shared sense of attachment to gender identity coupled with a strong evidence of attachment to sectarian identity, it remains to be seen whether ethnic cleavages are making it difficult for women to cooperate across ethnic lines in the pursuit of collective gains. On the whole, the data for our sample aligns well with our understanding of the broader societal context depicted in Section [2.3.1](#).

### **2.3.5 Treatment exposure**

Upon arrival at the study site, participants were asked to provide informed consent and fill out the self-administered pre-survey questionnaire. After filling out the survey, participants were invited to sit together at a table where everyone could see one another, as well as the

trained session Moderator.<sup>12</sup> Most importantly, to ensure that participants were aware of their group composition before playing the public goods game, the Moderator provided this information during her introductory remarks using the following script<sup>13</sup>:

*We are meeting today to discuss the recent developments in the country, mainly the protests that recently began in Lebanon. Many persons consider that these protests may present an important moment to reflect about the future of this country regardless of their outcome.*

*We have invited you here today to engage in a discussion with members from [SAME/ DIFFERENT] sectarian groups and [SAME/DIFFERENT] economic classes so that you can share with each other your thoughts and feelings about your economic and political hopes and concerns. Some of what we discuss today could be sensitive and at times people might disagree—that is ok. We just ask that you engage with one another with honesty and respect so that we can all learn more about how people who we do not know personally are thinking and feeling on the issues that we all face.*

Participants were then asked to introduce themselves and offer basic personal information (e.g. on their jobs or neighborhoods) that would confirm their profiles to all other members of the group.<sup>14</sup> We took precautions to ensure that the public goods game was administered by a separate member of the moderation team who was trained to lead the exercise. This

<sup>12</sup>All 120 sessions were led by one of two (women) moderators, who themselves belonged to different sectarian groups (our main analysis includes moderator fixed effects, as described in Section 2.4.2). The moderators took care not to reveal their sectarian affiliations, their names are common to all sectarian groups in Lebanon, and they displayed no outward signs of religiosity in their language or dress.

<sup>13</sup>We note that our public goods experiment was implemented in the months following mass cross-sectarian and cross-class protests over the government’s failure to manage trash collection (see e.g. <https://www.nytimes.com/2015/08/30/world/middleeast/lebanon-protests-garbage-government-corruption.html>). These protests demonstrate that, while Lebanon’s institutions and political elites remain divided on the basis of sect, many ordinary Lebanese are in fact willing to engage and cooperate across sectarian lines. This increases the importance of understanding how intersecting social identities among women and among men could still impede cooperation even in a time of heightened recognition of the need to take collective action across sectarian lines.

<sup>14</sup>Participants were then led in a moderated, structured discussion. The structure was the same for all groups. In other work, we analyze the impact of group composition on the outcomes of political discussion. Here, we focus only on the impact of group composition on cooperation prior to discussion.



was to offset the potential for social desirability bias to affect the contribution decision since participants knew the main moderator would be leading them through an hour-long discussion after the first round of the public goods game was completed.

### 2.3.6 The public goods game

We evaluate the potential for coethnic favoritism in cooperation to vary by group gender using a public goods game. In general, the public goods game is designed to test the belief that when goods are non-excludable (meaning everyone can benefit from them regardless of whether they contribute to their production) goods will be under-provided because of the free-rider problem. In this sense, the public goods game represents a classic social dilemma where there is a trade-off between behavior that will maximize individual gains and behavior that will maximize the gains of all members of the group as a whole (i.e. the most efficient outcome). We designed a unique variation of the public goods game to investigate how group composition affects willingness to cooperate with fellow group members.<sup>15</sup> We interpret contributing to the public good as an indicator of an individual's willingness to cooperate with fellow group members (at cost to the individual) so that all can achieve the best possible outcome (and not only a single individual). Contributing to the group pot (public good) requires the individual to pay a cost in order to help other members of the group, sacrificing the best possible individual outcome so that all members of the group can be better off overall. We evaluate whether there is a clear preference for cooperative behavior with in-group as opposed to out-group members and to what extent this result differs for women's and men's groups.

Because we want to isolate preferences for cooperation based solely on knowledge of the group's composition, we employ a linear one-shot voluntary contribution mechanism design. Many studies show that the likelihood of cooperation increases when there is a threat of punishment in later rounds or when players expect to interact with the same partners over time (Axelrod, 1984; Kurzban, Burton-Chellew and West, 2015). To make sure the

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<sup>15</sup>Our design featured a two-stage public goods game without learning in between rounds, but the focus in this paper is on the results from the first round of the game only.

contributions we observe are a function of preferences given only information about group composition (and not fears of peer sanctioning or reputational impacts in later rounds), we informed our participants that there would be no opportunity for punishment in the context of our experiment and that individual contribution amounts would never be made public to the other participants in the session.<sup>16</sup> While some argue that one-shot designs are not sufficient for participants to understand the payoff structure and play the game with any kind of coherent strategy or purpose (Palfrey and Prisbrey, 1996), the significance of this critique has largely been invalidated through a number of studies that locate stronger predictors of cooperation than decision error, including altruistic motivations (Andreoni and Vesterlund, 2001) and reciprocity motivations (Croson, 2007, 2008). In other words, people are capable of making strategic decisions in one-shot public goods games. Moreover, these designs are particularly useful for reducing the noise introduced by iterated designs which bring a greater possibility for results to be driven by reputational concerns, social learning, group solidarity, or punishment, all of which could obscure our understanding of the independent effect of ethnic group composition on willingness to cooperate in social settings.

Participants played with 10,000 Lebanese pounds (LL) that they earned for completing a pre-treatment survey upon arrival at the site. At each session, all six participants filled out the pre-survey before joining the other group members in a room. A trained Moderator then framed the context for the game by describing the group’s composition in terms of sectarian affiliation and economic class status before inviting the assistant into the room to lead the public goods game. Participants were allowed to contribute any amount in 1,000 LL increments to the group pot. To indicate their choice, participants circled a contribution amount on a slip of paper,<sup>17</sup> inserted the paper into an envelope labeled with their participant identification number, and then passed the envelope back to the assistant moderator. Payoffs were determined as follows: the total amount contributed to the group pot was multiplied

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<sup>16</sup>It is possible that fear of punishment or a motivation to punish could still be a factor since studies show that single-shot interactions can still reflect punishment mechanisms (see Kurzban, Burton-Chellew and West (2015) for a review). Importantly, even if a punishment motivations still exists, these motivations in one-shot public goods games are typically stronger for in-group members than for out-group members (Carpenter and Matthews, 2012), implying this would only serve to reinforce the anticipated negative effect of the mixed-ethnic setting on cooperation, making any results to the contrary even more surprising.

<sup>17</sup>All participants had the option to contribute from 0 to 10,000 LL in increments of 1,000.

by 1.5 and divided evenly among all six participants, regardless of whether they contributed or not. Thus, the payoff function for each subject  $i$  was:

$$\pi_i = 10,000 - c_i + 0.25 \cdot \sum_{j=1}^6 c_j \quad (2.1)$$

where  $c_i$  is the contribution to the public account of subject  $i$ , in any group whose 6 members are indexed by  $j$ . The marginal per capita return (MPCR) from the public good was 0.25. Participants were not informed of the final results of the game until just prior to exiting the facility and only after completing a post-treatment survey questionnaire and signing receipts for payment. A total of 713 subjects participated in the experiment.<sup>18</sup> The average amount earned in the public goods game was \$7.85 USD.<sup>19</sup> The maximum amount earned in the public goods game was \$14.00 USD while the minimum amount earned in the public goods game was \$2.50 USD.<sup>20</sup> For women, the average total payoff from the public goods game was \$7.78 USD, with a minimum earned of \$2.67 USD and a maximum of \$12.17 USD. For men, the average total payoff from the game was about \$7.89 USD, with a minimum of \$2.50 USD and a maximum of \$14.00 USD.

## 2.4 MAIN RESULTS: COOPERATION IN MIXED-ETHNIC GROUPS

### 2.4.1 Preliminary descriptive evidence

Our initial interest is in evaluating whether there is any evidence of coethnic favoritism in cooperation as the ethnic politics literature predicts, or whether we see evidence of gender-based variation in preferences for cooperating with coethnics over non-coethnics. Before pro-

<sup>18</sup>The average group size of six participants in our study is in line with standard public goods game designs where groups typically include 3-6 participants (Kurzban, Burton-Chellew and West, 2015, 585).

<sup>19</sup>For reference, the hourly minimum wage in Lebanon is about \$3.78 USD.

<sup>20</sup>In Lebanese currency: the average amount earned in the public goods game was 11,769 LL, with a minimum of 3,750 LL and a maximum of 21,000 LL earned for the full sample of participants. The amount earned in the game was combined with a \$20 USD show-up fee for participation in all activities involved in the experiment, including the discussion portion not analyzed here, to yield each individual's total compensation for participation in the approximately 90-minute study.

ceeding to the full estimation and analysis, we review the descriptive statistics for our main dependent variable: contributions to the group pot (public good) by gender and treatment group type. The results presented in Figure 1 give us a sense of the range of contributions to the public good as well as how the average contribution differs among women's groups compared to men's groups. Where the full estimation reduces this variation to a set of average contributions by group type and group gender, the descriptives shown here allow us to see any patterns in the data that could be obscured by comparing only the group averages.

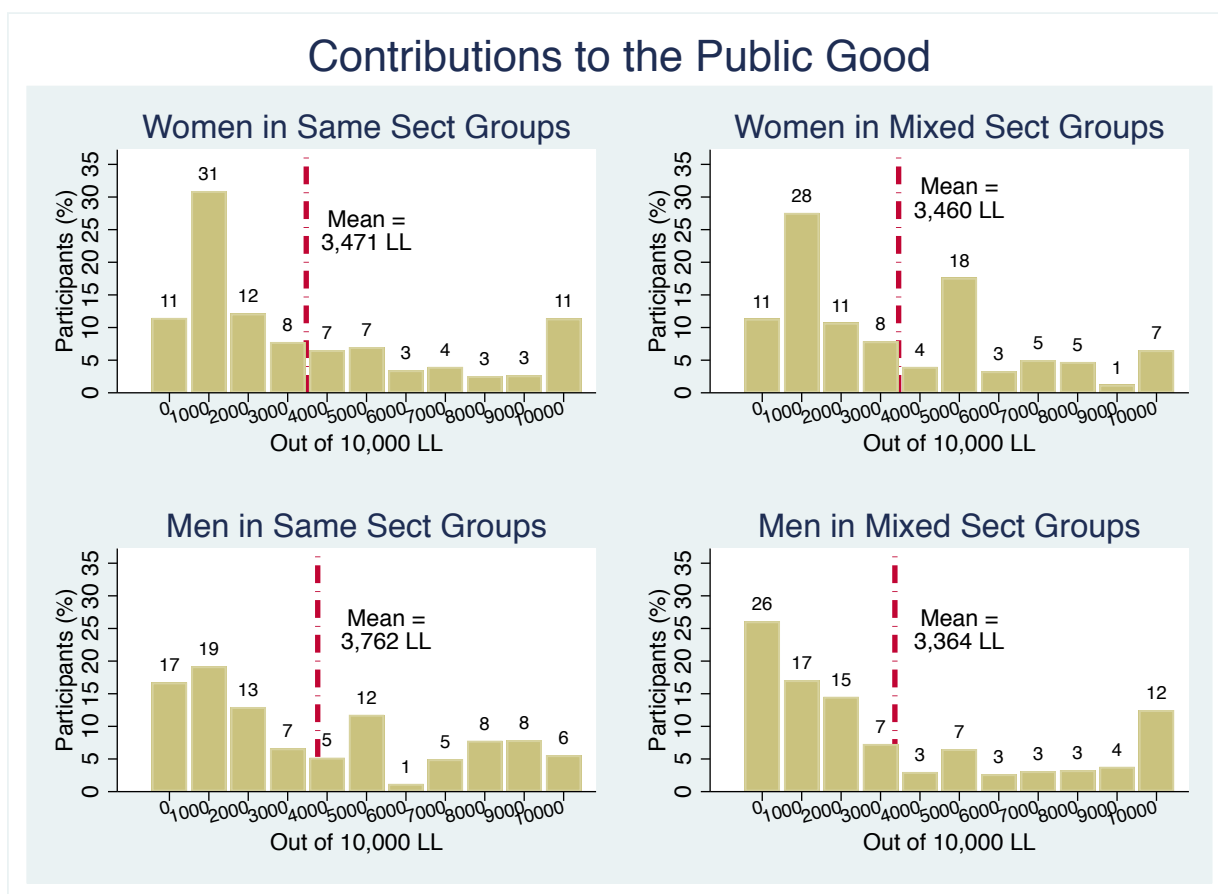


Figure 1: Distribution of contributions to the public good by gender and ethnic group composition.

The preliminary results suggest that, on average, women cooperate at similar levels in same-sect and mixed-sect groups. As shown in Row 1 of Figure 1, women contribute an average of 3,471 LL in same-sect groups, which is nearly identical to the mean contribution by women in mixed-sect groups of 3,460 LL.<sup>21</sup> By contrast, the mixed-sect group setting does seem to have a negative effect on cooperation among men. In Row 2 of Figure 1, we observe that, unlike women, men give noticeably more on average in same-sect (3,762 LL) compared to mixed-sect groups (3,364 LL). We also note that the distribution of results suggests more variation among women in response to the mixed-sect treatment than among men, while there is more variation among men in response to the same-sect group treatment. In neither case do we observe clear evidence of a strong preference for cooperating with coethnics over non-coethnics, further reinforcing the need to look at heterogeneous effects within gender groups in the main statistical analysis.

#### 2.4.2 Estimation strategy

The descriptive evidence suggests that cooperation among women is not necessarily negatively affected by the presence of cross-cutting ethnic group cleavages, though cooperation among men does seem to be lower in mixed-ethnic compared to same-ethnic settings. To confirm this relationship, we examine our data using statistical models to see how well these results perform when we account for other factors that could have influenced the results. To estimate the effect on cooperation of mixed (versus homogeneous) ethnic group composition, we employ a weighted least squares regression of the following form:

$$Y_{ij} = \alpha + \beta T_i + X_i' \gamma + \epsilon_i \quad (2.2)$$

where  $Y_{ij}$  is the outcome (i.e. contribution to the Group Pot) for individual  $i$  in group session  $j$ .  $T_i$  is the treatment indicator for whether an individual is in a mixed-sect group. The key coefficient of interest is  $\beta$ , which gives the effect of being in a mixed-sect versus

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<sup>21</sup>It is worth noting that the average contribution to the group pot across all participants in the sample approaches the average contribution of about 40% of the initial endowment that is typical of public goods game designs (Ledyard, 1995). This provides confidence in the external validity of our results since they are similar in magnitude to much of the empirical literature.

same-sect group on the level of cooperation.  $X_i'\gamma$  is a vector of individual-level controls included to improve efficiency and control for any imbalance, and  $\epsilon_i$  is the individual level error term.<sup>22</sup> All analysis is performed using weights to account for unequal treatment assignment probabilities across blocks (Gerber and Green, 2012).<sup>23</sup>

We run the analysis for the subsample of 285 women participants in women-only groups to arrive at the average treatment effect (ATE) of the mixed-sect group for women overall ( $n = 285$ ). We perform the same analysis on our data from men’s groups ( $n = 428$ ) for comparison. Because all participants were assigned to single-gender groups, we are able to differentiate between the effects of sectarian group composition for men and for women separately.<sup>24</sup> We present the average treatment effect without controls (Model 1) as well as the main estimation (Model 2) which includes a battery of pre-treatment covariates plus an additional indicator for the number of participants in the session<sup>25</sup> and a dummy variable indicating which of the two possible moderators led the discussion portion of the session (moderator fixed effects).<sup>26</sup> We also included a count variable of the number of days until the next election relative to when the session was implemented to control for the influence of sectarian electoral politics over decision-making in the context of the game.<sup>27</sup>

Our data preparation closely followed our pre-analysis plan for the larger pre-registered design. We implemented 10 rounds of predictive mean-matching imputation to address a small amount of item-level missingness in pre-treatment covariates. Where measures capture one latent trait of interest, we aggregate them into indices using inverse covariance weighting, which creates an optimal weighted average by weighting-up index components that provide more ‘new’ information (Anderson, 2008). All indices, unless noted, were pre-registered.<sup>28</sup>

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<sup>22</sup>We do not cluster standard errors because treatment was assigned at the individual level (Abadie et al., 2017).

<sup>23</sup>See Appendix D.4 for more on how the weights were constructed.

<sup>24</sup>This approach is similar to the gender-differentiated analysis of average treatment effects that Espinosa and Kovářík (2015) adopt in their public goods experiment on framing effects in cooperation.

<sup>25</sup>Out of 120 groups, seven completed the experiment with only five participants instead of the required six.

<sup>26</sup>Both Moderators and the Assistant Moderator (responsible for implementing the public goods game) had sect-neutral first names, abstained from wearing any religious clothing or symbols, and never revealed their sectarian affiliation to study participants. All three members of the Moderation Team were women.

<sup>27</sup>This is consistent with our review of the literature in Section 2.2 highlighting the importance of politicized ethnic identities for electing politicians in ethnically divided societies.

<sup>28</sup>Summary statistics for all variables are in Appendix B.1.

All models incorporate robust standard errors. In Appendix C, we show that our main results are robust to a number of different estimation strategies, including additional controls for comprehension of the payoff structure in the public goods game and whether any of the participants claimed to know one another prior to meeting at the study site, as well as specifications that include strata fixed effects.<sup>29</sup>

### 2.4.3 Regression results

The main results are presented below in Table 1. Model 1 presents the results without including any controls, while Model 2 includes the full battery of pre-treatment covariates and moderator fixed effects. We present the average treatment effect of the mixed-sect group setting for women alongside the average treatment effect for men’s groups to bring comparative perspective to the results.<sup>30</sup> Overall, the statistical evidence largely substantiates the patterns we observe in Figure 1. In Row 1 of Table 1, we see that there is no statistically significant effect of the mixed-sect treatment group on cooperation among women overall. Moreover, the coefficients in both model specifications are too small to even be suggestive of a general direction of the effect. This is consistent with our expectation that there are good reasons to suspect that the logic of coethnic bias in cooperation is unlikely to operate through the same mechanisms for women that it does for men.

However, we do not find clear evidence that men, overall, have a strong preference for cooperating with coethnics over non-coethnics as much of the literature on ethnic politics would predict. In Row 2 of Table 1, we can see that the direction of the coefficients for the effect of the mixed-sect group treatment on cooperation among men are negative, consistent with what we would expect, yet neither Model 1 nor Model 2 reach conventional levels of statistical significance. The size of the coefficients for the mixed-sect treatment, however, are noticeably larger than we observe for women. We interpret this as generally weak evidence of

<sup>29</sup>For each of the five recruitment cycles, we block randomly assigned participants to treatment groups within strata defined by gender, sect, economic class, and neighborhood, additionally blocking on recruiter where possible.

<sup>30</sup>To be clear, while these results for the experimental treatment effect are not directly comparable across gender groups, they are worth considering as observational evidence indicative of gender-differentiated responses to the mixed-ethnic group composition treatment.

Table 1: Main results.

	Same Sect Mean	Model 1	Model 2	<i>N</i>
<b>Women's Groups</b>				
<i>Mixed sect</i>	3471	-11 (376) 0.977	-224 (399) 0.574	285
<b>Men's Groups</b>				
<i>Mixed sect</i>	3762	-398 (343) 0.247	-465 (343) 0.175	428

*\*p<0.10 \*\*p<0.05 \*\*\*p<0.01 Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.*

coethnic favoritism in cooperation among men, which is a surprising result given the wealth of empirical work purporting to demonstrate that coethnic bias in collective action exists. In the next section, we unpack these unexpected results by focusing on how ethnic in-group favoritism may be more acute for particular types of individuals.

## 2.5 COETHNIC FAVORITISM AMONG SPECIFIC SUBGROUPS

In Section 2.2, we proposed there could be gender-differentiated effects of ethnic group composition due to the potential for variation by gender along three key dimensions: (1) access to material benefits through coethnic elites; (2) strength of attachment to sectarian identity; and, (3) strength of attachment to gender identity. In particular, we proposed that women



may be less prone to show coethnic bias in cooperation because of limited access to material benefits through coethnic elites, reduced salience of the link between ethnic identification and access to resources, and the countervailing influence of strong attachment to gender identity that coincides with norms of pro-sociality and cooperation linked to women’s social role within Lebanese society. In this section, we use pre-treatment survey data to evaluate whether heterogeneity in response to the mixed-ethnic group treatment owing to membership in these different subgroups could help explain variation in coethnic favoritism in cooperation. Drawing on measures developed from questions in our pre-treatment survey instruments, we introduce an interaction term into the main equation presented in Section 2.4.2 and evaluate the treatment effects for different subgroups of women and men. First, we consider the material and psychological benefits explanations for coethnic favoritism in cooperation. The results from this analysis are surprising and vary along gender lines. As a result, we also investigate the potential for strength of attachment to gender identity to influence cooperation in mixed-ethnic (versus same-ethnic) group settings.

### 2.5.1 Connections to coethnic elites and sectarian identification

We first evaluate coethnic favoritism in cooperation among individuals in our sample who are more/less connected to benefits through sectarian political elites. To measure access to benefits through sectarian leaders, we asked participants: “Q11: *Let’s say that you needed help getting access to benefits, such as health care or schooling or jobs. How easy or difficult would it be for you or someone in your household to get help on this matter from...(a) Za’im/politician...*” The answer options were: “(1) *Very difficult*, (2) *Somewhat difficult*, (3) *Not too difficult*, or (4) *Not difficult at all*.” To facilitate comparisons in the statistical analysis, we code all respondents with answers of “Not too difficult” or “Not difficult at all” as *Strongly Connected* (which takes the value of ‘1’) and all those with answers of “Somewhat difficult” or “Very difficult” as *Weakly Connected* (which takes the value of ‘0’). This yields a binary indicator of access to benefits through coethnic political elites that allows us to evaluate how much coethnic favoritism in cooperation may depend on individuals having access to material benefits through coethnic elites.

We then consider how attachment to sectarian identity could proxy for the psychological benefits associated with coethnic favoritism. Individuals who are more attached to their sectarian identity could reasonably be expected to derive greater psychological benefits from belonging to that group than those who feel weakly attached to their sectarian group. To evaluate the extent to which attachment to sectarian identity influences preferences and behavior, we asked participants: “*Q14: People in Lebanon often have different identities. Some people identify themselves in terms of their confession, gender, region, or age. Others identify themselves in economic terms, such as lower/working class or upper class or by their profession. Looking at the list below, please rank in order from 1-7 the identities that you feel from strongest to weakest (where 1 is strongest and 7 is weakest).*” One of the identity categories was “*your confession,*” meaning participants were required to rank the relative importance of their sectarian social identity. To facilitate our estimation of the effect of the mixed-sect treatment on cooperation conditional on strength of attachment to sectarian identity, we create a binary version of relative strength of attachment to sectarian identity that takes the value of ‘1’ for all respondents who ranked sectarian identity as the identity they feel most attached to (*Strong Identifiers*) and ‘0’ for all respondents who rated sectarian identity as something other than their strongest identity (*Weak Identifiers*).<sup>31</sup> This yields a binary indicator of relative strength of attachment to sectarian identity that allows us to evaluate how much coethnic favoritism in cooperation may depend on how much women and men value their sectarian identity relative to other social groups to which they belong.

For the estimation, we analyze contributions to the public good conditional on whether individuals are (1) ‘strongly connected’ or ‘weakly connected’ and (2) ‘strong sectarians’ or ‘weak sectarians.’ We present the results as conditional average marginal effects for women’s and men’s groups estimated separately. We check the robustness of our results to the inclusion of the same control variable specifications included in the main results presented in Section 2.4.<sup>32</sup> The results for the conditional marginal effect of the mixed-sect

<sup>31</sup>In Appendix C.2, we include additional results from estimations that use a measure where we code those naming sectarian identity in their top three social identities as *Strong Identifiers* and all others as *Weak Identifiers*. The results are generally robust to both specifications.

<sup>32</sup>The only changes we make to the covariates included in the analysis are to remove the index of ‘connectedness’ from our list of controls for the estimation by connectedness to sectarian political leaders and the index of ‘sectarian identity’ from our list of controls for the estimation by strength of attachment to sectarian identity.

group treatment on contributions to the group pot for different subgroups of participants are presented in Table 2. In Panel A, we present the conditional average marginal effect of the mixed-sect group treatment depending on access to material benefits through political elites, while Panel B reports the conditional average marginal effect of the mixed-sect treatment on cooperation given weak versus strong attachment to sectarian identity.

We turn first to the results for women in Panel A. In terms of access to benefits through politicians or Za'im, we note that our summary statistics show that only 46 women in our sample (out of 285 total) indicated that they can access benefits through coethnic elites, while 203 women declared this to be either 'somewhat difficult' or 'very difficult.' The same-sect mean contribution presented in the first column of Panel A represents the first point of difference between strongly connected women and those who are weakly connected: women with strong connections to benefits through politicians contribute almost 700 LL more on average in same-sect groups than women with weak connections (4,084 versus 3,347). This could indicate that norms of cooperation within same-sect group settings are strongly for more connected women. Moreover, we observe clear evidence that women in our sample who lack access to benefits through coethnic political elites show no statistically significant difference in their willingness to cooperate in mixed-sect compared to same-sect groups. In stark contrast, we find that women with strong connections (Row 2, Panel A) are significantly less cooperative in mixed-sect compared to same-sect groups. In our main specification (Model 2), the coefficient for the mixed-sect treatment indicates that connected women contribute more than 1,400 LL less in heterogeneous ethnic settings compared to homogeneous ethnic settings, a difference that corresponds to connected women cooperating at about half the level in mixed-ethnic environments that they would in same-ethnic environments. This result is significant at the 0.10 level, which is fairly strong considering the relatively small sample size of just 46 strongly connected women.

Importantly, the negative effect of the mixed-sect group setting on cooperation among strongly connected women is very similar to what we observe for well connected men. Men with access to benefits through political elites contribute more than 1,000 LL less in mixed-sect groups than they do in same-sect groups, on average. Notably, we do not observe the

Table 2: Conditional marginal effect by access to elites and sectarian identification.

	<u>Women's Groups (n = 285)</u>			<u>Men's Groups (n = 428)</u>		
	<i>Same Sect</i>	<b>Mixed Sect</b>		<i>Same Sect</i>	<b>Mixed Sect</b>	
	<i>Mean</i>	<b>(b/se/p)</b>		<i>Mean</i>	<b>(b/se/p)</b>	
		<i>Model 1</i>	<i>Model 2</i>		<i>Model 1</i>	<i>Model 2</i>
<b><u>Panel A: Access to benefits through politicians</u></b>						
<i>Weakly Connected</i>	3347	249	54	3479	-43	-188
<i>(Very or somewhat difficult)</i>		(426)	(450)		(433)	(438)
		0.560	0.905		0.922	0.668
<i>Strongly Connected</i>	4084	-1143	-1430*	4356	-1138*	-1048*
<i>(Not too difficult or not difficult at all)</i>		(842)	(829)		(622)	(618)
		0.176	0.086		0.068	0.091
<b><u>Panel B: Strength of attachment to Sectarian ID</u></b>						
<i>Weak Sectarian ID</i>	3360	-18	-246	3615	-163	-179
<i>(Sectarian ID is not #1)</i>		(436)	(455)		(387)	(393)
		0.967	0.589		0.673	0.650
<i>Strong Sectarian ID</i>	3910	-136	-252	4364	-1317	-1552*
<i>(Sectarian ID is #1)</i>		(853)	(853)		(828)	(819)
		0.874	0.768		0.113	0.059

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.

same negative reaction to the mixed-sect group among weakly connected men in our sample. Instead, we detect no evidence of a statistically significant difference in contributions by less-connected men in mixed-sect compared to same-sect groups. Also similar to what we

observe for women when disaggregating by connectedness, strongly connected men contribute noticeably more in same-sect groups than weakly connected men (4,356 versus 3,479). On the whole then, we find support for the argument that those who benefit from the distribution of material benefits through coethnic channels are more likely to display coethnic favoritism when it comes to cooperating in group settings, a result that holds for single-gender groups of both men and women.

In contrast to the similarities witnessed in Panel A, we observe clear differences in cooperation between women and men in single-gender groups in the results conditional on strength of attachment to sectarian identity, shown in Panel B. First, we observe a robust null effect of the mixed-sect group treatment on cooperation among women for both women who are strongly sectarian and for women who are weakly sectarian.<sup>33</sup> In neither case do we see any significant difference in contributions to the group pot in mixed-sect versus same-sect groups. At the same time, we note that women who identify as strong sectarians contribute about 600 LL more in same-sect group, on average, than women who more weakly identify with their sectarian identity (3,910 versus 3,360). This is consistent with expectations that individuals who strongly identify with their sectarian identity may cooperate at higher levels in coethnic environments. However, the null effect of the mixed-sect group setting on cooperation by strong sectarians is surprising in light of the supposed link between attachment to sectarian identity and the psychological benefits attributed to abiding by stronger norms of cooperation within ethnic groups than across them.

This surprising effect of the mixed-sect treatment among strong sectarian women is magnified by the fact that we do not observe the same null result among strong sectarian men. Instead, among men, strong attachment to sectarian identity is associated with a large and statistically significant negative effect of the mixed-ethnic group setting on cooperation (p-value = 0.059). In the main specification (Model 2), strong sectarian men contributed, on average, 1,152 LL less in mixed-ethnic groups than in same-ethnic groups. On the whole, this suggests that strong attachment to sectarian identity reinforces coethnic bias in cooperation for men, but not necessarily for women. This lends support to our expectation that the

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<sup>33</sup>Note that 59 women in our sample self-identified as feeling most attached to their sectarian identity, while 186 women ranked some other social identity higher than sectarian identity in relative importance.

logic of coethnic bias in cooperation may vary within ethnic groups along gender lines and introduces additional questions pertaining to why sectarian identification may not operate the same way for men and women in a given societal context.

### **2.5.2 Gender identity and cooperation across ethnic lines**

Our finding that strong sectarian women are not less cooperative in mixed-ethnic compared to same-ethnic group settings is particularly surprising. Where psychological attachment to sectarian identity clearly reinforces coethnic bias in cooperation among men, we do not see the same relationship for women. Since we observe this phenomenon in the same context where access to benefits through coethnic elites exerts a similar influence on cooperation in mixed-ethnic settings for both men and women, this raises the possibility that the differentiating factor in terms of how men and women respond to ethnic cleavages in group settings has to do with how gender intersects with different norms linked to membership in various social groups.

In line with social psychological theories of gendered social roles, we anticipated in Section 2.2 that variation in attachment to gender identity could help explain any observed lack of coethnic favoritism in cooperation among women that we might encounter in our analysis. This literature broadly argues that women are more prone to abide by pro-social norms of interdependence and cooperation in group settings than men are, owing to the social roles attributed to women in many societies which evolved to reward women for cooperation but tend to reward men for competition and independence (Eagly and Wood, 1991). Applying this logic to our study, we expect that women who more strongly identify with their gender identity may be more likely to abide by strong norms of cooperation with other women, regardless of the sectarian composition of the group, than women who feel less attached to their gender identity.

In the pre-treatment survey, we also asked participants to rank the relative importance of their gender identity (relative to six other categories of social identities that also included sectarian identity). To facilitate our estimation of the effect of the mixed-sect treatment

on cooperation conditional on strength of attachment to gender identity, we create a binary version of relative strength of attachment to gender identity that takes the value of ‘1’ for all respondents who ranked gender identity as the identity they feel most attached to (*Strong Identifiers*) and ‘0’ for all respondents who rated gender identity as something other than their strongest identity (*Weak Identifiers*).<sup>34</sup> We code respondents in line with this scheme and compare treatment effects within women’s groups by strength of identification. As in the analysis of attachment to sectarian identity, we examine the conditional average marginal effect of the mixed-sect group treatment on cooperation for ‘weak identifiers’ and ‘strong identifiers.’ The results are presented in Table 3.

We find suggestive evidence that attachment to gender identity has a different effect on cooperation in mixed-sect groups for women compared to men. Among all-women groups, we note that relatively weak attachment to gender identity is associated with a much higher average level of cooperation in same-sect groups compared to what we observe among women who most strongly identify with their gender group identity (3,918 versus 2,916). On the one hand, this is notable because it suggests that norms of within ethnic group cooperation may be stronger for women who are less attached to their gender identity, since they cooperate at a higher level in same-sect groups than strong gender identifiers. On the other hand, it is worth noting that these average levels of cooperation in same-sect groups differ as well from what we observe for men. Most especially, while weak attachment to gender identity is associated with similar levels of contribution in same-sect groups (3,918 for women and 3,668 for men), strong attachment among women is associated with noticeably lower levels of cooperation in coethnic settings than what we observe for strong gender identification among men (2,916 for women versus 4,004 for men). This is important, since it suggests that strong attachment to gender identity could trigger different norms of cooperation in same-sect settings for men and women, leading men to cooperate more with coethnics while leading women to cooperate less.

Moreover, while we note that none of the coefficients in this part of the analysis are

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<sup>34</sup>In Appendix C.2, we include additional results from estimations that use a measure where we code those naming gender identity in their top three social identities as “Strong Identifiers” and all others as “Weak Identifiers.” The results are generally robust to both specifications.

Table 3: Conditional marginal effect by attachment to gender identity.

	<u>Women's Groups (n = 285)</u>			<u>Men's Groups (n = 428)</u>		
	<i>Same Sect</i>	<b>Mixed Sect</b>		<i>Same Sect</i>	<b>Mixed Sect</b>	
	<i>Mean</i>	<b>(b/se/p)</b>		<i>Mean</i>	<b>(b/se/p)</b>	
		<i>Model 1</i>	<i>Model 2</i>		<i>Model 1</i>	<i>Model 2</i>
<b><u>Strength of attachment to Gender ID</u></b>						
<i>Weak Gender ID</i>	3918	-428	-765	3668	-345	-314
<i>(Gender ID is not #1)</i>		(516)	(511)		(424)	(425)
		0.408	0.136		0.417	0.460
<i>Strong Gender ID</i>	2916	492	535	4004	-545	-774
<i>(Gender ID is #1)</i>		(561)	(569)		(635)	(653)
		0.381	0.348		0.392	0.237

**\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$**  Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.

significant at conventional levels, the magnitude and change in direction of the coefficients is notable and worthy of a brief discussion. First, we see that the mixed-sect group treatment has a negative effect on the level of cooperation by men regardless of their attachment to their gender identity. This negative effect of the mixed-sect treatment on cooperation is greatest for men who are strongly attached to their gender identity. Most importantly, we observe a different pattern in cooperation in mixed-sect groups for women, conditional on attachment to gender identity. Where weak attachment to gender identity is associated with lower average levels of cooperation in mixed-sect than in same-sect groups of women, strong attachment to gender identity is associated with exactly the opposite. Again, while



these coefficients are not statistically significant, the magnitude of the positive coefficient for cooperation in mixed-sect groups for strongly identified women is important given the difference between this positive coefficient (535 LL) and the negative coefficient we see for weakly identified women in mixed-sect groups (-765 LL). On the whole, this suggests that weak attachment to gender identity is associated with a reduced willingness to cooperate with women from other sectarian backgrounds (relative to co-sectarians), while strong attachment to gender identity is associated with greater willingness to cooperate across sectarian divides. This result is clearly unique to women in our sample and does not exist in the same way for men.

## 2.6 GENERAL DISCUSSION AND CONCLUSIONS

To summarize our results, we find that the material and psychological benefits explanations for coethnic favoritism in cooperation in groups does not apply universally to single-gender groups of men and of women. Instead, we find that while both men and women with access to benefits through coethnic political elites are less cooperative in mixed-ethnic settings than in homogeneous ethnic settings (indicative of support for the material benefits motivation for coethnic favoritism in collective action), strong attachment to sectarian identity does not reinforce norms of coethnic bias in cooperation for women in the same way that it does for men. Strong sectarian women do not cooperate at significantly lower levels in mixed-sect compared to same-sect groups, while strong sectarian men do cooperate significantly less in mixed-sect than in same-sect groups. This is inconsistent with prevailing accounts of the psychological benefits linked to coethnic solidarity and suggests that other factors may influence cooperative behavior for women. We speculate that women's shared gender group membership could influence their willingness to cooperate with one another regardless of sectarian background. We evaluate this prediction and find suggestive evidence that stronger attachment to gender identity is associated with greater willingness to cooperate with other women from different ethnic backgrounds, while relatively weak attachment to gender iden-

tity is linked to greater cooperation within same-sect groups and a reduced willingness to cooperate in mixed-sect groups, though the coefficients in our analysis are not significant at conventional levels.

Plausible explanations for the difference in the effect of the mixed-sect context conditional on attachment to gender identity can be found in the literature on gender differences in cooperation in the context of inter-group competition over resources. To the extent that masculinity is linked to the ability to provide for one's immediate family or peer network, men who feel strongly attached to their gender identity may be motivated to demonstrate their capabilities in a display of 'competitive altruism' in same-sect social settings where men cooperate regardless of personal cost to gain status in the eyes of similar (coethnic) others (Hardy and Vugt, 2006). This may be more salient for men because evidence suggests that men are more amenable than women to competitive group environments (Niederle and Vesterlund, 2007; Lee, Kesebir and Pillutla, 2016). Research on the 'warrior-male hypothesis' posits that men have developed a stronger propensity for cooperation in coalitions through the necessity of group-based warfare over scarce resources (Van Vugt, Cremer and Janssen, 2007), which could also help explain why masculinity may be tied to stronger norms of within-ethnic group cooperation among men than among women.

The finding that stronger attachment to gender identity is associated with an increased willingness to cooperate with other women in heterogeneous ethnic settings suggests a path forward for policymakers and movement activists seeking to unite women across salient ethnic divides. Our results indicate that reinforcing the relative salience of gender identity among women may lead to stronger preferences for working across ethnic divides on shared issues. In fact, the relatively low level of cooperation by women who strongly identify with their gender identity could even suggest a tendency to reject norms of cooperation that prioritize coethnics over the needs of women in general. In other words, we could be observing evidence that women, more so than men, may be inclined to reject the ethnic political status quo in favor of working across sectarian lines for mutual gain, but only if they perceive their gender identity as their most important social group membership. In the absence of a strong attachment to gender identity, women may cooperate less in mixed-ethnic group

settings. On the whole, this suggests that programs or interventions designed to elevate the salience of shared interests owing to shared gender identity among women in Lebanon could improve prospects for collective organizing in pursuit of policies with the potential to positively impact all women, regardless of sect. This interpretation of the results would be consistent with existing evidence from research conducted with women representatives in Afghanistan, where [Larson \(2012\)](#) shows that women are unlikely to cooperate with one another on issues of interest to women more broadly in the absence of a clear sense of shared gender group membership.

Importantly, we do not interpret these results as evidence that women are inherently less biased against members of other sectarian groups than men are. Rather, we believe they suggest that willingness to cooperate with members of other ethnic groups depends on the extent to which individuals benefit from access to coethnic elites within their own group. Since men are more likely than women to benefit from coethnic elite networks within society overall, cooperating with coethnics is more likely to resonate with higher numbers of men as a way to gain access to resources. It is possible that since relatively fewer women have similar access to resources through coethnic political elites, we do not observe the same negative effect of the mixed-sect group treatment on cooperation among women overall that we do among men. As more women find themselves with access to benefits through coethnic political elites, we could expect to observe similar levels of coethnic favoritism in cooperation among women as we do among men. This interpretation of our findings parallels arguments from [Goetz \(2007\)](#) and others who refute essentialist explanations for gender differences in behavior and instead focus on the gendered structural and institutional barriers to participation in political activities. Critiquing research on gender gaps in corruption among public officials, [Goetz \(2007\)](#) argues that it is not necessarily that women are inherently less corruptible than men, it is just that they have fewer opportunities to participate in corrupt activities than their male counterparts.

Yet, our results may also signal that there are limits to the potential for women's shared gender group solidarity to unite women to take collective action under all conditions. In particular, we note that women with access to benefits through coethnic elites are probably more

likely to be elites themselves. This suggests that there may be another dimension at play in terms of how the ethnic composition of the social environment influences women's willingness to work together. While we control for the socio-economic background of all participants in our study, we also recommend that future research consider the intersection of gender and elite economic status and how these social identities intersect to influence cooperation among women. Our findings do not clearly point towards ethnic group membership as the key driver of cooperation among women which suggests that it is possible that class-based differences in access to material resources could be driving preferences more so than other cross-cutting cleavages. If this is true, it would suggest that socio-economic divisions among women are the greater barrier to collective action, not ethnic cleavages. On the whole, our findings underscore the need to consider how social identities intersect to inform cooperative behavior in groups, as well as the need to be attuned to the potential for conflicting norms linked to various group memberships to complicate expectations of behavior on the basis of any single identity group category.

### 3.0 WOMEN, SOCIO-ECONOMIC STATUS, AND COOPERATION IN GROUPS: EVIDENCE FROM A PUBLIC GOODS EXPERIMENT IN LEBANON

#### 3.1 INTRODUCTION

In the past two decades, numerous studies have documented the incredible surge in women’s political representation worldwide.<sup>1</sup> Explanations for this dramatic shift have ranged from international to national-level factors. For example, [Hughes, Krook and Paxton \(2015\)](#) argue that the increase in women holding elected office is related to the transnational diffusion of norms that encourage the adoption of gender-based quotas for women’s representation in politics. In fact, the evidence suggests that the norm of women’s inclusion rather than exclusion in politics is now stronger than ever before ([Paxton, Hughes and Green, 2006](#)). However, despite the introduction of these electoral rules intended to help “jumpstart” women’s involvement in political decision-making ([Dahlerup and Freidenvall, 2009](#); [Krook, 2009](#)), some evidence suggests these efforts to mobilize for women’s representation are not always inclusive of all women. For instance, the women’s movement in Uganda is largely credited with successfully winning quotas for women’s representation in government in the 1990s ([Tripp, 2000](#)). Yet, the same movement is often criticized as elitist and lacking in the political will needed to initiate changes that would benefit all women in the population more broadly ([Tamale, 1999, 2003](#)). Relatedly, in Lebanon, efforts to mobilize women in support

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<sup>1</sup>I am indebted to Sami Atallah, Joanna Fayad, Zeina Hawa, and Zeina Helou for their tireless help with implementation. This project was made possible by funding that the Lebanese Center for Policy Studies (LCPS) received from the Embassy of Norway. It is covered under University of Pittsburgh IRB PRO15060167; the procedures for data collection and select portions of the analysis were pre-registered at [egap.org/registration/2208](https://egap.org/registration/2208).

of gender-based quotas for representation in politics have been hampered by deep divisions among women over the need for such a policy change (Helou, 2009). In other words, despite evidence of a global rise in norms promoting the inclusion of women in politics, these norms do not necessarily inspire widespread collective action by women as a group on the basis of their shared gender identity.<sup>2</sup>

There are several possible explanations for this phenomenon. On the one hand, it is possible that women may want to organize on the basis of shared gender identity for group-level gains for women, but institutional or structural obstacles persist that impede mass mobilization (Kangas and Rostgaard, 2007). Alternatively, it could be that women do not tend to mobilize on the basis of their shared gender identity because women as a group do not have a coherent set of interests (Beckwith, 2011; Celis et al., 2014). In this case, shared gender group identity may not be as informative of the potential benefits to be had by taking collective action as perhaps another social identity that implies a more specific set of shared policy goals. A third possibility is that shared gender identity alone does not cue women to the presence of strong norms of cooperation in group settings. For example, Klar (2018) demonstrates that the potential for shared gender identity to unite women across salient political divides depends on the extent to which gender identity entails the same set of values and expectations of behavior for women on opposite ends of that divide. To the extent that these norms differ across social groups within society, highlighting shared gender identity could reinforce social cleavages that divide women rather than unite them.

This paper examines women's ability to cooperate with one another across socio-economic class lines. This is an important topic to address because building widespread support for political action among women could require cooperation across class lines. Research shows that socio-economic class identity may be at least as important to people as their racial or gender identity (Easterbrook, Kuppens and Manstead (2018) cited in Manstead (2018)). This may be especially true for behavior linked to political action, as Brown-Iannuzzi, Lundberg

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<sup>2</sup>The data for this essay comes from a coauthored project so I adopt the use of 'we' throughout. The design of the experiment was a collaborative effort between this author, Laura Paler (University of Pittsburgh), and Sami Atallah (Lebanese Center for Policy Studies). See Paler, Marshall and Atallah (2018) for an example of co-authored work that draws on other data collected during the experiment. The writing and analysis presented here is original and solo-authored in fulfillment of the requirements for the dissertation.

and McKee (2017) show that class context is linked to patterns of preferences for various forms of collective action. Yet, despite the fact that socio-economic status and class identity have been the topic of political, economic, philosophical, and sociological study for centuries, very little experimental evidence exists that links socio-economic identity to patterns of collective action.

On the one hand, we might expect women to cooperate across socio-economic class lines. The norms of appropriate behavior attributed to women are synonymous with characteristics in the literature from experimental economics and social psychology shown to correlate with cooperation in same-group social settings (Eagly and Wood, 1991; Hyde, 2014). Moreover, results from a number of recent experiments suggest a strong norm of cooperation exists among women in single-gender group settings (Greig and Bohnet, 2009; Berge, Juniwaty and Sekei, 2016; Fearon and Humphreys, 2017). This result is unique to groups composed only of women, indicating there may be some effect of women’s shared gender identity on willingness to cooperate.

On the other hand, we might expect women to cooperate less across socio-economic class lines. Recent evidence suggests a strong link between socio-economic status and variation in patterns of behavior. Where low socio-economic status is often associated with helping behaviors, empathy, and pro-social norms of cooperation in groups, high socio-economic status is typically linked to independence and self-interest in interpersonal interactions (Manstead, 2018). This suggests that variation in socio-economic class status could influence the norms of cooperation that exist among women in group settings because class-based norms prescribe different behaviors for women in group settings compared to gender-based norms. This raises an important question: *Do socio-economic class cleavages influence the level of cooperation between women?*

To examine this, we test preferences for cooperation among women in mixed-class versus same-class group settings using a public goods game experiment implemented in Lebanon, a country characterized by strong norms of behavior linked to gender identity and rising socio-economic inequality that cuts across gender groups. We randomly assigned respondents to participate in single-gender, six-person group settings where all subjects came from the

same socio-economic class background (same-class), or where three participants were upper-class and three were lower-class (mixed-class). After a trained moderator informed all group members of the group's composition, participants played a public goods game designed to measure their preferences for cooperating with one another knowing only their group's composition in terms of gender, class, and ethnicity. One advantage of this design is that it requires individuals to face a trade-off between maximizing their individual payoff from the game, and maximizing the outcome that would be best for all members of the group as a whole. This makes the public goods game a good test of preferences for group-level outcomes over individual-level gains. In terms of building coalitions and taking collective action for group-level gains, this is analogous to an individual foregoing incentives that would benefit them at the cost of other group members in order to support behavior that would lead to better outcomes for all members of the group as a whole. Another key advantage of our approach is that we use natural identities that incorporate measures of subjective and objective socio-economic class collected during a screening survey exercise used to identify participants for the experiment. To our knowledge, this is the first study of this size to experimentally evaluate the impact of socio-economic class group composition on cooperation among women.

We find that women are not unconditional cooperators. Socio-economic class cleavages in the mixed-group environment are associated with lower average contributions to the public good. Additionally, we find that the magnitude of this negative effect of the mixed-class setting on cooperation differs across class groups: rich women have a more negative reaction to the mixed-class setting than do poor women. Moreover, we compare these results for women to cooperative outcomes in all-male group sessions conducted around the same time. We find that the mixed-class group treatment has the opposite effect on cooperation for men, suggesting that the effect we observe for women is unique.

In effect, this paper represents an effort to take seriously the implications of intersectionality for interpreting the effects of shared group membership on cooperation ([Crenshaw, 1991](#)). Understanding the extent to which the influence of shared gender identity on cooperation is shaped by the existence of cross-cutting socio-economic cleavages has wide-ranging



implications for academics and policymakers alike, including those interested in gender-based representation in political decision-making, strategies for political mobilization along gender lines, and how political institutions can reinforce social inequalities and strengthen barriers to entry for members of marginalized groups. We elaborate more on these in the conclusion.

### 3.2 SOCIOECONOMIC CLASS AND COOPERATION AMONG WOMEN

Many scholars argue that women are guided by behavioral norms that prescribe cooperation in group settings. This is most profound in the social psychology literature on social-role theory which “emphasizes the causal effect of gender roles – that is, of people’s beliefs about the behavior that is appropriate for each sex” (Eagly and Wood, 1991, 309). In this context, gender roles are defined as “those shared expectations about appropriate conduct that apply to individuals solely on the basis of their socially identified sex” (Eagly and Wood, 1991, 309). More specifically, Eagly and Wood (1991, 309) identify a set of social norms that apply to men and women in various cultural contexts: “Women are expected to possess high levels of communal attributes, including being friendly, unselfish, concerned with others, and emotionally expressive. Men are expected to possess high levels of agentic qualities, including being independent, masterful, assertive, and instrumentally competent.” In general, these norms encourage women to display more *communal* behaviors linked to pro-sociality and contrast sharply with the *agentic* portrayal of the norms associated with men (Eagly and Wood, 1991). This depiction of women as unconditional cooperators is supported by recent empirical evidence from experiments involving public goods games (Greig and Bohnet, 2009; Berge, Juniwyty and Sekei, 2016). In fact, Fearon and Humphreys (2017) demonstrate that higher levels of cooperation between women (rather than in mixed-gender groups) cannot be attributed to expectations of other women’s giving, any perceived threat of punishment for not contributing, or concern about how the funds will be spent. This arguably lends further support to the idea that women prefer cooperating with one another on the basis of some underlying norm rooted in shared gender group membership.

However, there are good reasons to believe that women’s cooperation varies by socioeconomic class group membership. Socioeconomic class is important to consider because it represents another critical cleavage that could affect women’s ability to work together to achieve collective aims on the basis of their shared gender identity as women. For instance, the type of political action an individual is most likely to engage in is linked to their socioeconomic background: higher socio-economic status is associated with public displays of political activity (e.g. voting, writing to representatives, signing petitions), while lower socio-economic status is associated with more private forms of engagement (e.g. listening to radio programs or watching television shows about politics, talking to friends or family about issues) (Brown-Iannuzzi, Lundberg and McKee, 2017). Moreover, there is also some evidence that lower-class and upper-class individuals face different norms of cooperation in group settings as a consequence of their differing material conditions (Manstead, 2018). In general, upper-class individuals see life as full of choices and opportunities over which they exercise some degree of control, translating into norms of behavior that prioritize and value independence, self-orientation, prejudice in response to threat, and a disinclination to help others in distress (Manstead, 2018). In contrast, lower-class individuals are more likely to perceive constraints on their ability to move through society, are more sensitive to threats, perceive themselves as having little control over outcomes, and generally process the social world as interdependent, leading to social norms of appropriate behavior that are more other-regarding and empathetic (Manstead, 2018). In other words, socioeconomic status in general is linked to different patterns of behavior. Where women in general are thought to abide by norms of cooperation in group settings, class-based norms of behavior suggest that we might expect to observe variation among women along class lines, since the rich, in general, are portrayed as more *agentic* (and thus less other-regarding) while the poor, in general, are portrayed as more *communal* (and thus more concerned about the welfare of interdependent others).

This makes it important to consider how women cooperate in lower-class groups, in upper-class groups, and in mixed-class group settings since socioeconomic class status could influence the capacity for women to take collective action and realize substantive gains for women as a social group. Specifically, we consider whether poor women and rich women

cooperate more, less, or the same in mixed-class relative to same-class groups. This helps shed light on how women’s collective action capacity might vary by socioeconomic status, but it also helps us understand whether horizontal class cleavages among women undermine broader efforts to mobilize women on the basis of their shared experience as women in society. In the remainder of this section, we review the competing expectations of women’s behavior in heterogeneous class settings that emerge from recent literature.

### **3.2.1 Women and cooperation in homogeneous class settings**

Most of the available evidence suggests that we should expect lower-class women in same-class groups to cooperate at relatively high levels. For example, [Markus and Kitayama \(1991\)](#) argue that lower-class individuals are more likely to see themselves as interdependent and relying on social connections with others who, like them, face resource constraints. In turn, [Kraus et al. \(2012\)](#) and [Kraus and Stephens \(2012\)](#) argue that this also means lower-class individuals face greater exposure to threat in their immediate social environment which leads them to be more attuned to the social context. Relatedly, this concern for context, socialization toward interdependence, and familiarity with threat leads lower-status individuals to adopt more other-regarding behaviors, to demonstrate empathy, and to be more likely to help and to seek help from similar others in times of need ([Kraus et al., 2012](#); [Manstead, 2018](#)). This prediction is supported by empirical evidence that lower socioeconomic status (relative to higher socio-economic status) is associated with more generosity in laboratory settings ([Piff et al., 2010, 2012](#)), as well as higher trust and a greater willingness to help others ([Piff et al., 2012](#)). In the context of all-women group settings, this expectation could be reinforced by women’s shared gender group identity, since some evidence suggests that low gender status in society (e.g. being a woman rather than a man in a patriarchal system) is associated with stronger norms of interdependence in interpersonal interactions ([Cross and Madson, 1997](#)).

In contrast, the literature is somewhat less clear on what we should expect from upper-class women in same-class group settings. On the one hand, [Kraus, Tan and Tannenbaum \(2013\)](#) anticipate that upper-class individuals are more likely to pursue self-interested be-

haviors because of their comparatively high level of access to resources and opportunities affords them greater room for independent (rather than interdependent) action. This could suggest we should expect low levels of cooperation in upper-class groups of women. On the other hand, some evidence suggests that upper-class individuals may cooperate at relatively higher levels in same-class compared to mixed-class social settings (Côté, House and Willer, 2015). This could mean that we will not necessarily see low levels of cooperation by rich women in same-class groups. This might be especially likely if the social norms of cooperation attributed women by social role theories of gender exert a more powerful influence on behavior.

### 3.2.2 Women and cooperation in heterogeneous class settings

There are two major reasons to expect that lower-class women may cooperate less in mixed-class compared to same-class groups. First, the mixed-class nature of the group may raise the salience of poor<sup>3</sup> women’s relatively lower social status, thereby triggering perceptions of social exclusion. Candelo, Croson and Li (2017) show that strong identification with a salient social group can increase cooperation, but only when individuals do not perceive their group as socially excluded. Feelings of social exclusion are known to be associated with lower levels of empathy and interpersonal trust (Twenge et al., 2007), both of which are key determinants of cooperation in group settings. To the extent that poor women perceive themselves as socially excluded on the basis of their socioeconomic status, this may prevent them from cooperating with rich women (who do not perceive the same degree of social exclusion) on the basis of shared gender group membership.

Second, poor women may cooperate less in mixed-class settings due to concerns about fairness or due to a desire to correct perceived injustices in the distribution of resources in mixed-class settings. Empirical evidence shows that lower socio-economic status is associated

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<sup>3</sup>We use the terms ‘lower-class’ and ‘poor’ interchangeably alongside ‘upper-class’ and ‘rich’ while recognizing that both sets of terms may be problematic for normative reasons. In particular, we want to be clear that we do not use these terms to indicate any measure of social value or worth attributed to either group by the use of the label; we use these terms only to distinguish between the difference in access to material resources and material conditions of the context in which these individuals are situated.

with a stronger commitment to egalitarian values (Piff et al., 2012). Since women (more so than men) are known to be sensitive to egalitarian norms in group settings (Andreoni and Vesterlund, 2001), this effect could be magnified for lower-class women in single-gender groups. At the same time, people may be influenced by a ‘fairness perspective’ that leads them to perceive upper class individuals as “self-sufficient or having overbenefited from pooled resources” (Van Doesum, Tybur and Lange, 2017, 12). This evidence parallels two branches of research in social psychology. On the one hand, relative deprivation theory anticipates that perceptions of being disadvantaged relative to others can lead to feelings of anger and resentment (Gurr, 2011, 1993). On the other, perceptions of personal relative deprivation are associated with a decrease in pro-social behavior (Callan et al., 2017). Thus, to the extent that poor women in mixed-class settings are more likely to perceive themselves as disadvantaged relative to the wealthier women in their group or to the extent that they perceive this inequality as unfair, they may be less likely to cooperate than they would be in homogeneous class settings.

However, there is at least one good reason to expect that poor women may cooperate more in mixed-class compared to same-class groups: the demonstrated link between higher socio-economic status and trustworthiness. For example, Qi, Li and Du (2018) find that strangers with higher monthly incomes are perceived as more trustworthy than lower-income individuals and that this perception of trustworthiness has a causal effect on behavior in interpersonal interactions. Given the demonstrated link between trust and cooperation in group settings (Kocher et al., 2015), this suggests we might observe more cooperation by poor women in groups where rich women are present. Relatedly, to the extent that poor women in mixed-class groups perceive rich women as more trustworthy and thus ‘safe’ cooperation partners (i.e. lower risk), then we might expect high levels of cooperation by poor women in mixed-class groups. Given that women (more so than men) are thought to be risk averse (Eckel and Grossman, 2008b), it could be that this increased perception of trust by lower-class women in mixed-class groups has an influence on reducing uncertainty over the willingness of others to contribute and thus lowering the risk involved in cooperating.

In the case of rich women, there are good reasons to anticipate less cooperation in

mixed-class groups compared to same-class groups. First, as a consequence of the negative association between low socio-economic status and trustworthiness, rich women could experience increased perceptions of risk involved in cooperating in mixed-class groups where poor women are present. This is consistent with evidence that the association between high socio-economic status and decreased pro-sociality may depend on the presence of other mediating factors. For instance, [Côté, House and Willer \(2015\)](#) find that wealthier individuals are only less likely to behave pro-socially in the context of higher levels of economic inequality; they do not demonstrate the same lack of pro-sociality in more equal contexts. This could be due to feelings of entitlement by higher status individuals which are magnified in the presence of lower status individuals ([Côté, House and Willer, 2015](#)). In other words, the same relative status difference that triggers less cooperation by poor women in mixed-class settings could have a similarly negative effect on cooperation for rich women who are primed to act on self-interest (and therefore choose not to cooperate).

On the other hand, there are also some good reasons to expect that rich women will cooperate more in mixed-class groups than in same-class group settings. For example, [Hays and Blader \(2017\)](#) find a link between the perceived legitimacy of the social hierarchy and how individuals behave in unequal social settings. To the extent that wealthy women perceive their elevated socio-economic status as illegitimate, they may be more generous and cooperative in mixed-class settings in an effort to correct the imbalance and restore equity. It is possible that this mediator could magnify the effect of the link between gender and equity concerns, since other research suggests women are more sensitive than men to equity in group interactions ([Andreoni and Vesterlund, 2001](#), 306). In this case, we might observe more cooperation by rich women in mixed-class settings than in same-class settings owing to a stronger preference for equity in group settings.

Finally, we note that there is good reason to believe that women might behave differently from men in cooperative settings. While empirical evidence of sex differences in cooperation is mixed, a considerable body of work suggests that men and women respond differently to the context in which cooperation takes place ([Balliet et al., 2011](#)). For instance, research shows that men are more likely to take risks than women are ([Eckel and Grossman, 2008b](#)).

and more amenable to competitive group environments (Niederle and Vesterlund, 2007; Lee, Kesebir and Pillutla, 2016). To the extent that class cleavages within the group trigger uncertainty surrounding expectations that others will cooperate, this could raise the risk involved in cooperating, which could more readily be born by men than women. Similarly, to the extent that class cleavages encourage competition in the group setting, we might expect this to impact cooperation differently for men relative to women, who may favor strong equity norms more so than men (Andreoni and Vesterlund, 2001). The composition of the group – in terms of socio-economic class background – represents one feature of the cooperative context which could trigger different patterns of behavior for men and women that are linked to differences in gender-based norms of social interaction. As such, we focus specifically on how the intersection between class and gender matters for women’s cooperation, but also briefly investigate whether this differs observationally from what we see in terms of cooperation between men.

### 3.2.3 Summarizing our contribution

On the whole, then, there are good reasons to suspect class group heterogeneity could have no effect, a positive effect, or a negative effect on cooperation and that this effect is conditional on the socioeconomic class background of the individual in question. It is important to investigate this empirically in the context of cooperation among women because of its potential to inform our understanding of women’s capacity to take collective action on the basis of shared gender identity. Moreover, this is an interesting question because the literature largely predicts different cooperative norms for women on the basis of their gender identity (as women) than it does on the basis of their class identity (rich versus poor). This also differentiates them from men in a substantively important way. By examining cooperation among women in all lower-class, all upper-class, and mixed-class groups composed of both upper- and lower-class women, we can empirically evaluate how the class composition of the group setting impacts cooperative outcomes for women. This helps us understand whether class cleavages are a potential barrier to cooperation among women for group-level gains for women more broadly, as well as whether any observed effect is driven by changes in behavior

for one class group more so than the other.

### 3.3 RESEARCH DESIGN

Despite these conflicting predictions, no existing study (to our knowledge) experimentally evaluates how cooperation between women might vary as a function of class heterogeneity in group settings. We contribute to the field by testing these social dynamics using data collected during a public goods game exercise implemented in Lebanon in the spring of 2016. Public goods games are commonly used to model cooperation in group settings where there is some trade-off between behavior that would maximize the payoff for an individual and behavior that would result in the best payoff accruing to all members of the group as a whole (Ledyard, 1995; Balliet, Wu and Dreu, 2014). This makes it a good choice for measuring whether shared group membership (e.g. along gender or class lines) influences willingness to cooperate with others regardless of the individual cost of doing so. We draw on data from Lebanon because it is an excellent case for exploring how within-gender group inequality creates challenges for collective action across class lines. In this section, we describe the Lebanese context where we implemented our data collection, review our procedures for recruiting participants and randomly assigning them to different group composition treatments, highlight the novel aspects of our public goods game design, explain how we identified participants by socio-economic class status, and describe the protocol for treatment exposure and the administration of the public goods game itself.

Importantly, in the interest of full transparency, we want to be clear that this analysis is exploratory. While our public goods game design was pre-registered as part of a larger research project examining the impact of discussion across ethnic and class lines on a variety of political outcomes, our analysis here – focusing on how cooperation in mixed-class versus same-class groups varies by gender (with an emphasis on women) – was not pre-registered as part of the larger project. However, given the novelty of our public goods game data and the opportunity to use it to examine how intersecting gender and class identities im-



pact cooperation in natural groups, we believe this exploratory analysis warrants special attention despite the lack of pre-registration. As such, when we present our procedures for recruitment, random assignment, screening, and the play of the public goods game, we want to be very clear that the pre-registered research design was based on an analysis plan that did not involve disaggregating our results by group gender. For this reason, we describe the experimental design overall and indicate where our analysis deviates from the pre-registered version and proceeds into new territory.

### **3.3.1 Women and class cleavages in Lebanon**

Our data comes from Lebanon, a country that is deeply divided along ethnic and class lines and where gender identity is a socially salient feature of nearly all group settings. It is also a context in which women have struggled to build large coalitions across class lines in favor of critical policy changes, such as the introduction of gender-based quotas for representation in politics or the passage of a unified personal status law that would protect the rights of women regardless of their sectarian background.<sup>4</sup> This makes Lebanon an excellent choice for examining the potential for cross-cutting socio-economic cleavages to impact the level of cooperation among women, with clear implications for understanding women's capacity for collection action on the basis of shared gender group identity.

The history of collective organizing among women in Lebanon is replete with examples of how socio-economic class relates to collective action in group settings. In the pre- and early-civil war years (from 1968-1982), intense fracturing along sectarian lines within the country at large contributed to the siloing of women's groups within each sect (Peteet, 2001, 142). In the context of increasingly heated debates between sectarian groups over control of the state, women's organizations were left with few formal resources to organize or act for women's issues in the public sphere (Peteet, 2001, 142). In this environment, women's

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<sup>4</sup>Among other things, personal status laws regulate property ownership connected to marriage and inheritance. Under current law, women's access to economic, political, and society equality under the law varies depending on which of the various religious sects they belong to, since this determines which of the many religious courts they must enter for disputes related to marriage or family law. There is far more variation in the regulations across religious courts for women compared to men, which makes them doubly-disadvantaged by the current arrangement.

informal networks became increasingly salient as a means to access the goods and services needed for survival, elevating the importance of individual accountability to these peer social networks and the norms associated with cooperation within them ([Graham-Brown, 2001](#); [Joseph, 2001](#)).<sup>5</sup>

This means that women's organizing in Lebanon emerged within communities facing similar economic and social issues and bound by socio-economic ties. At the same time, the historical record suggests that this was not a norm of cooperation among women as much as it was a norm of cooperation among women within different socio-economic class ranks. For instance, evidence of class bias in collective organizing among women in Lebanon dates back to at least the 1920s, when women's organizations were viewed as elitist and lacking in grassroots support at the lower socio-economic levels of society ([Kingston, 2013](#), 86). Over the last decade, backlash against some women's organizations uses similar rhetoric, with one blogger declaring one of the more prominent women's movement organizations to be an "elitist club for ladies who lunch" ([Mahdawi, 2010](#)). Recent trends in development funding and project-based aid may also contribute to the perception of a widening gap between formal, highly professionalized women's organizations and individuals based in particular communities ([Khattab, 2010](#)). The formal organizational structure and capacity of larger women's organizations makes them more attractive to donors, which frustrates the efforts of smaller groups to gain attention. This is important because the informal spaces of women's political participation are linked to both gender and class with clear implications for movement organizational strategy ([Joseph, 2001](#), 38): "middle or upper class women may be less likely than working class women to act politically in the street, neighborhood or square. They may, on the other hand, be more likely to act through formal organizations: political parties, women's associations, philanthropic organizations, religious institutions, social agencies, and the like." This polarization is documented elsewhere in focus groups and interviews with members of these different organizational types who express frustration and concern over cooperating with groups perceived as 'elitist' in the context of mobilizing and

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<sup>5</sup>A similar dynamic has been located by researchers in Iran. For example, [Bahramitash \(2014\)](#) shows that there is a dense network of low-income Islamic women who work together in an informal "solidarity" economy to alleviate poverty in their communities; through collective efforts, these lower and lower-middle income women distribute resources primarily toward their families and larger communities.

organizing for women's rights ([UN Women, 2017](#)). These class rifts are important because they speak to the challenges for mobilizing women across class lines.

Moreover, recent events suggest that many women's movement organizers are aware of the barrier that in-group class bias presents to achieving widespread policy change. In fact, recent developments suggest the tide may be turning under pressure from movement organizers in favor of more inclusive and collaborative efforts across class lines. On International Women's Day on March 11, 2017, organizers brought together almost 2,000 activists from a wide variety of university clubs, NGOs, feminist initiatives, and cooperatives to march and show solidarity with one another in the fight for women's rights in Lebanon. The march organizers were explicit about their desire to include participants in the movement from a wide variety of socio-economic backgrounds ([Issa, 2017](#)): "Our approach is mainly about going beyond an elitist feminism that ignores the 99 percent of women and limits the action against patriarchy into NGOs." Still, some researchers argue that the women's movement in Lebanon continues to struggle even with the new influx of radical organizations because older organizations are deeply entrenched and maintain affiliations with powerful sectarian groups ([Salameh, 2014](#)). While this suggests that historic patterns of collective organizing between women in Lebanon could change in the near future, it also underscores the existence of class bias and class-related challenges in cooperation between women.

These social norms of cooperation among similarly situated women coincide with highly gendered norms of social behavior in the society at large. Despite being regularly identified as an outlier in terms of inclusion and progress in the region, Lebanon lags behind its neighbors considerably on measures of gender parity. The Global Gender Gap Report (2017) ranked Lebanon 13th out of 17 countries in the Middle East and North Africa – ahead of only Saudi Arabia, Iran, Syria, and Yemen – in its 'Global Gender Gap Index,' which aggregates scores from four sub-indexes that compare men and women within the same country on a range of indicators.<sup>6</sup> In particular, Lebanon continues to face challenges in making progress on women's political empowerment, with just 3 percent of the seats in Parliament and 4

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<sup>6</sup>The four sub-indexes are: 'Economic Participation and Opportunity,' 'Educational Attainment,' 'Health and Survival,' and 'Political Empowerment.' For more information, see [World Economic Forum \(2017\)](#). In terms of the overall gender gap across these four spheres, Lebanon ranked 137th out of the 144 countries measured in the index.

percent of the ministerial positions held by women ([World Economic Forum, 2017](#), 208). This could be considered surprising given that women in Lebanon have had the right to vote since 1953 and the women's movement has been active since the early 20th century. Yet, while Lebanon's consociational democracy dictates that power be shared roughly equally across political parties representing the three major religious sects in the country, there are no special requirements that women be included as representatives in political processes.<sup>7</sup>

These political inequalities are linked to differences in social norms; there is little doubt that Lebanon is a highly unequal society in which men and women are confronted with very different expectations of behavior. Men face social pressures to marry and support their family financially, while women (particularly married ones) face social pressure to take on the majority of the domestic labor and raise children ([Hammoud, 2014](#)). Within this context, women – as a whole – face considerable challenges to participating in political and economic decision-making. For example, gendered social norms regarding property ownership and control over household finances means it is less likely that women (compared to men) own assets that are registered in their name ([Akeel, 2009](#)). Without personal assets, it is harder for women to borrow money within the Lebanese banking system ([Akeel, 2009](#)), which could limit their economic opportunities and financial independence regardless of class group membership.

On the whole, this makes Lebanon an ideal case for examining the cross-cutting influence of class identity on cooperation between women. Women, regardless of class background, have strong incentives to organize for changes that would benefit women as a group. Yet, there is considerable evidence suggesting that class-based cleavages may be impeding cooperation among women on key issues. The presence of gendered social norms of behavior, a history of class bias in cooperation, rising economic inequality, and persistent challenges to building widespread support for policy change on the basis of women's shared gender identity mean that our public goods game data presents us with an important opportunity to

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<sup>7</sup>Lebanon has 18 officially recognized sects, including 12 Christian sects, four Muslim sects, Druze and Jewish populations. The most recent demographic study conducted in 2011 by Statistics Lebanon, a Beirut-based research firm, indicated that 27 percent of the population are Sunni Muslim, 27 percent Shi'a Muslim, 21 percent Maronite Christian, 8 percent Greek Orthodox, 5 percent Druze, and 4 percent Greek Catholic, with the remaining 7 percent belonging to smaller Christian denominations, see <http://www.globalsecurity.org/military/world/lebanon/religious-sects.htm>.

empirically evaluate whether class cleavages do impact cooperation among women in group settings.

### **3.3.2 Recruitment and random assignment to treatment group types**

To examine how cooperation among women varies in different class contexts, we draw on data that we collected during 120 group interactions among strangers organized in Beirut between February and April 2016. These 120 groups consisted of participants who were recruited by a professional Lebanese firm and randomly assigned by us to participate in either homogeneous or heterogeneous small group discussions. In accordance with our pre-registered design, these 120 groups were all single-gender and consisted of 48 all-women groups and 72 all-male groups. Prior to the start of these discussions, participants completed a screening survey (to facilitate recruitment and proper identification of socio-economic class background), a pre-treatment survey, and one round of a public goods game designed to measure willingness to cooperate with each other knowing only the class and gender composition of the group.<sup>8</sup> We take advantage of the data collected during this public goods game exercise to explore cooperation among women across class lines.

We worked with a professional Lebanese firm to develop a protocol for recruiting subjects into our experiment who varied in terms of their gender, socio-economic class background, neighborhood, and sectarian group (i.e. ethnic background). Individuals with upper and lower socio-economic class profiles were recruited from the Beirut and Mount Lebanon areas and randomly assigned to participate in either homogeneous groups (all six participants shared the same class background) or heterogeneous groups (three were upper-class and three were lower-class). Overall, our randomization resulted in 60 homogeneous and 60 heterogeneous class groups involving a total of 720 participants, of which 713 completed the study. This included 285 women and 428 men.

The 120 groups were organized in five blocks of 24 group sessions, with 12 homogeneous

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<sup>8</sup>Participants were also aware of the sectarian composition of the group. We explored this cleavage in the first essay of the dissertation, but also take steps in this essay to show that it is the class cleavage – not the ethnic cleavage – that most influences cooperation among women in Lebanon.

and 12 heterogeneous class groups per block. Participants were recruited by a professional firm for one discussion block at a time with recruiters using screening surveys to identify eligible participants (discussed in detail below). Once eligibility and willingness to participate were confirmed, each recruit was randomly assigned to a discussion group type, further blocking on sect and class. One set of discussions was completed every 2-3 weeks between February and April 2016. We completed two sets (48 groups) with women and three sets (72 groups) with men. This allows us to look specifically at how cooperation varies among women in group settings. In Section 3.4.4, we also present the results for all-male groups for comparison. The sets were implemented in alternating fashion between all-men and all-women groups to help minimize the possibility that any observational differences between men and women in the results could be driven by the intervention of a particular event in time as opposed to gender-based differences in behavior. Additional details on our design and randomization are provided in Appendix D.

### 3.3.3 Potential selection issues and randomization checks

To meet the target of 720 participants in 120 groups, we recruited a total of 1200 individuals (720 participants and 480 back-ups). To obtain the goal of 1200 individuals, we recruited 40 individuals for each set of the five blocks. We block randomized individuals by profile type and discussion block with the goal of obtaining 24 participants and 16 extras for each discussion block.<sup>9</sup> For each group session, we over-recruited by 50 percent for each profile to make sure that we would have the correct group composition for the scheduled session. Upon arrival at their scheduled discussion session, participants were checked in by staff and informed consent was administered. Participants were not designated as ‘main’ or ‘backup’ in advance. If extra participants arrived, those that were asked to stay were randomly selected. This was essential to ensure that those who participated in each discussion were a random sample of those who were assigned to that treatment condition. We asked our implementing partner to schedule the discussions such that every person in the pool would show up at

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<sup>9</sup>Additional information on the six profile types needed for each set of discussion groups is provided in Appendix D, along with a more detailed description of the potential for selection into participation to bias our estimates of cooperation.

one discussion in accordance with their treatment assignment, ensuring that we always had more individuals than necessary of each profile type at each session. The implementing partner was then supposed to randomly select (for each profile type) who would actually stay to participate and who would be asked to go home (after receiving compensation) or be invited to a different session. In actuality, however, the partner typically ended up getting only the target number of participants to show up for each discussion, which introduced the possibility that there was some differential selection into who ended up participating in the public goods game.

The main concern here is that selection into participation could have introduced imbalances in pre-treatment characteristics for individuals in treatment (mixed-class) and control (same-class) groups. To help address this potential issue, we draw on data collected from a pre-treatment survey that participants filled out after arriving to the study site and before learning the composition of their group and playing the public goods game. Alongside the data from the screening survey, this pre-survey allows us to evaluate the effectiveness of our randomization protocol, as well as test for significant differences in our sample on key covariates, such as gender and class. Table 24 (in Appendix E) shows that random assignment to mixed-class and same-class treatment groups was effective, as nearly all of the potential confounding characteristics of individuals are distributed evenly across treatment conditions within the full sample (713 observations) as well as within the women’s subsample (285 observations, see Table 22) and within the men’s subsample (428 observations, see Table 23). This increases our confidence that any cause for concern is negligible. We nevertheless include control variables in our main analysis to correct for any imbalances in observable pre-treatment covariates.<sup>10</sup>

Relatedly, since participant gender is obviously not randomly assigned, our estimation strategy relies on using controls for any potential confounding variables to prevent omitted variable bias from affecting our inferences. We discuss this more in describing our estimation strategy in Section 3.4.2 below. Summary statistics for both the men and the women in

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<sup>10</sup>Summary statistics for all women in our sample, as well as disaggregated by socio-economic class background, are available in Appendix G.2 alongside an extended discussion of the importance of class-based differences among women.

our sample are available in Appendix G.3, along with an extended discussion of observable gender-based differences in background characteristics.

### 3.3.4 A novel approach: identifying participants by economic class

While we are confident that our protocol for random assignment was effective, making valid inferences based on our results depends on our ability to accurately categorize participants as either upper-class or lower-class for the purpose of random assignment to group types. This is also one of the most novel features of our study, since all subjects recruited to participate in our experiment were first approached by a professional recruiter who interviewed them using a specially designed screening survey meant to elicit both objective and subjective measures of socio-economic class status.<sup>11</sup>

**3.3.4.1 The importance of incorporating natural identities** Our original contribution is to explicitly consider the interaction of socio-economic class identity and gender on cooperation among women using natural identities and random assignment to groups that vary in terms of their socio-economic class composition (either all same-class or mixed-class). Other public goods game experiments present results that are suggestive of heterogeneous effects of identity on cooperation (Eckel and Grossman, 2008a,b; Croson, Marks and Snyder, 2008; Charness, Cobo-Reyes and Jimenez, 2014; Chowdhury, Jeon and Ramalingam, 2016). However, most analyses of the impact of economic class on cooperation rely on experiments that attempt to mimic economic class cleavages by introducing artificial wealth inequality into the group setting. For instance, it is not uncommon to test the effect of inequality in groups on cooperation by providing participants in public goods experiments with varying initial endowments (see, for example, Buckley and Croson (2006); Chan et al. (1996)). Those select few studies that do try to engage with participants' actual economic class membership tend to rely on measures of wealth that use the income level of the neighborhood (or university) where participants are sampled from as a proxy for socio-economic status and its

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<sup>11</sup>Incorporating both types of measures is thought to be essential for capturing various dimensions of class identity and its potential influence on individual behavior (Brown-Iannuzzi, Lundberg and McKee, 2017).



effect on cooperation in public goods experiments (Candelo, Croson and Li, 2017; Martinson, Villegas-Palacio and Wollbrant, 2015), or proxy for class status using measures of an individual’s occupation or level of educational attainment (Gächter, Herrmann and Thöni, 2004).

In our case, the incorporation of natural identities is not only novel, but also potentially essential for detecting results. For example, Goette, Huffman and Meier (2012) show that (relative to minimal group designs) those involving real social groups demonstrate larger in-group effects on cooperation and beliefs about the cooperativeness of others. This means that observing any impact of class identity on cooperation may depend on incorporating real class identity into the experiment and not only simulating it. More importantly, additional evidence suggests that women (compared to men) are especially sensitive to the use of real identities in experimental settings involving social dilemmas (Chowdhury, Jeon and Ramalingam, 2016). This means that detecting any effect of class identity on cooperation among women could hinge on the use of natural identities. Consequently, our design uniquely positions us to investigate the effect of the interaction of real socio-economic and gender identities on group-level outcomes with serious implications for understanding the limits and possibilities of women’s collective action in the real world.

**3.3.4.2 Eliciting class group membership using the screening survey** The primary purpose of the screening survey was to identify potential participants by their socio-economic class status, in addition to collecting minimal demographic information. The screening survey included a set of eight questions designed to categorize potential participants’ class background using multiple measures of economic affluence.<sup>12</sup> We assigned each of the answer options for these questions a value indicative of low (1), middle (2), or high (3) economic status. For each potential participant, the answers to these economic status questions were converted to one of these three values. All values for these questions were then totaled to yield an economic status index that we used to approximate the economic status of each potential participant. The minimum possible score was 8 (1 point on each

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<sup>12</sup>See Appendix F for the full text of the Screening Survey administered to recruits.

question), while the maximum possible score was 24 (3 points on each question). Recruits scoring between 8 and 13 were labeled ‘lower income,’ while those scoring between 19 and 24 were labeled ‘upper income.’ We discarded those recruits who scored between 14 and 18 as ineligible for the study because we wanted to maximize (to the greatest extent possible) the class cleavages between lower-income and upper-income participants. We anticipated that class differences between participants in mixed-class groups would be more evident if we removed those who qualified as ‘middle class’ according to our screening survey index. In the event that responses were missing to 1 or 2 of the questions included in the index, we applied an alternative scoring system, outlined in Appendix F. In the event that more than two questions in the screening survey were unanswered, we disqualified the recruit from participation in the study.

Table 4: Summary statistics for the socio-economic status index across the full sample.

	<b>Sample</b>	<b>Poor</b>	<b>Rich</b>	<b>Test of the Difference</b>	
	<b>mean</b>	<b>mean</b>	<b>mean</b>	<i>b</i>	<i>p-value</i>
Value of total household assets (1-3)	1.65	1.02	2.27	1.24	0.000
Estimated area (size) of household (1-3)	1.72	1.12	2.32	1.20	0.000
Owens a summer house (1-3)	2.04	1.12	2.96	1.84	0.000
Power alternatives during an outage (1-5)	2.55	1.85	3.25	1.41	0.000
Can afford to vacation at least once per year (1-3)	1.87	1.15	2.59	1.45	0.000
Frequency of dining out per month (1-3)	2.11	1.57	2.65	1.09	0.000
Monthly household net income (1-10)	6.73	5.57	7.90	2.33	0.000
Subjective monthly household income (1-5)	3.29	2.11	4.47	2.36	0.000
<i>N</i>	713	356	357		

*All estimates incorporate weights that correct for unequal treatment assignment probabilities across strata and use robust standard errors.*

A test of the internal validity of our class index measure for categorizing respondents demonstrates that our eight measures of socio-economic class status reveal highly significant statistical differences between rich and poor participants in our sample overall (see Table 4).<sup>13</sup> We also checked the correlation of our ‘rich’ and ‘poor’ categorization to two other mea-

<sup>13</sup>See Table 28 in Appendix G.3 for confirmation that this is also true for the subsample of women’s groups as well as the full sample overall.

asures of economic class status using data we collected with our on-site pre-treatment survey instrument. Our categorization of participants by class group membership (where poor = 1) is highly correlated with self-reported economic class membership (correlation coefficient = 0.631), as elicited in the following self-administered pre-treatment survey question: “Q9: Which of the following do you think best describes the economic class to which you or your household belongs? (1) Elite (very wealthy), (2) Upper class (rich), (3) Middle class (neither rich nor poor), (4) Lower class (poor), or (5) Destitute (extremely poor)?” We also repeated the screening question that asked about total net monthly household income in the on-site pre-treatment survey and found that responses to this question were also highly correlated with economic class status (where rich = 1) as measured by the index of screening survey questions (correlation coefficient = 0.700). On the whole, these robustness checks lend strong support to our categorization method and increase our confidence that class group cleavages were evident in these interactions.

### 3.3.5 The protocol for treatment exposure

Upon arrival at the study site, participants were asked to provide informed consent and fill out the self-administered pre-survey questionnaire. After filling out the survey, participants were invited to sit together at a table where everyone could see one another, as well as the trained session Moderator.<sup>14</sup> Most importantly, to ensure that participants were aware of their group composition before playing the public goods game, the Moderator provided this information during her introductory remarks using the following script:

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<sup>14</sup>All 120 sessions were led by one of two (women) moderators, who themselves belonged to different sectarian groups (our main analysis includes moderator fixed effects, as described in Section 3.4.2). The moderators took care not to reveal their sectarian affiliations, their names are common to all sectarian groups in Lebanon, and they displayed no outward signs of religiosity in their language or dress.

*We are meeting today to discuss the recent developments in the country, mainly the protests that recently began in Lebanon. Many persons consider that these protests may present an important moment to reflect about the future of this country regardless of their outcome.*

*We have invited you here today to engage in a discussion with members from [SAME/ DIFFERENT] sectarian groups and [SAME/DIFFERENT] economic classes so that you can share with each other your thoughts and feelings about your economic and political hopes and concerns. Some of what we discuss today could be sensitive and at times people might disagree—that is ok. We just ask that you engage with one another with honesty and respect so that we can all learn more about how people who we do not know personally are thinking and feeling on the issues that we all face.*

Participants were then asked to introduce themselves and offer basic personal information (e.g. on their jobs or neighborhoods) that would confirm their profiles to all other members of the group.<sup>15</sup> We took precautions to ensure that the public goods game was administered by a separate member of the moderation team who was trained to lead the exercise. This was to offset the potential for social desirability bias to affect the contribution decision since participants knew the main moderator would be leading them through an hour-long discussion after the first round of the public goods game was completed.

### **3.3.6 The public goods game**

**3.3.6.1 Overview of the design** Our public goods game includes features common to one-shot, voluntary contribution mechanism designs. We focus on one round of play that occurred immediately after the introduction script was read and participants introduced each

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<sup>15</sup>Participants were then led in a moderated, structured discussion. The structure was the same for all groups. In other work, we analyze the impact of group composition on the outcomes of political discussion. Here, we focus only on the impact of group composition on cooperation prior to discussion.

other, thereby confirming the gender and socio-economic class composition of the group.<sup>16</sup> The game was supervised by a trained assistant who completed two example exercises and two practice activities with the participants to ensure comprehension of the payoffs.<sup>17</sup> All participants were informed that there could be no talking during the exercise and that contribution decisions would be kept anonymous. Our focus is on evaluating whether there is a clear preference for cooperation in same-class group settings as opposed to mixed-class group settings. We interpret the difference in average contributions to the Group Pot in mixed-class groups compared to same-class groups as evidence of class bias in cooperation.

We view contribution behavior in the public goods game as a strong measure of willingness to cooperate conditional on group composition for several reasons. First, there is general consensus in behavioral economics that one-shot public goods games are useful for identifying substantively meaningful patterns of cooperation (Ledyard, 1995; Fischbacher, Gächter and Fehr, 2001; Chaudhuri, 2016). Second, the small group design of the public goods game lends itself well to manipulating aspects of shared group membership, a prominent feature of the social setting shown to have a positive impact on cooperation (Chen and Li, 2009; Benjamin, Choi and Strickland, 2010). Finally, voluntary contribution designs like ours are indicative of behavior in real-world settings involving choices about whether to take collective political action (Nosenzo and Tufano, 2017): “Voluntary associations, collectives, community groups, and collaborative institutions are typical real-world examples of organizations facing collective action problems where agents have the freedom to join in, or opt out from, participating in the common endeavors.” Altogether, this increases our confidence in being able to draw meaningful inferences from our results that have substantive real-world applications to women’s capacity for collective organizing.

**3.3.6.2 Payoff structure of the game** Participants played with 10,000 Lebanese pounds (LL) that they earned for completing a pre-survey upon arrival at the site. Participants were

<sup>16</sup>This round of play took place at the start of the pre-registered discussion experiment and was designed as a pre-discussion measure of willingness to cooperate. There was a second round of play after the discussion took place, but we do not focus on that here.

<sup>17</sup>In Appendix H, we check the robustness of our results to the inclusion of a payoff comprehension measure constructed from data collected using these practice activity instruments.

allowed to contribute any amount in 1,000 LL increments to the group pot. To indicate their choice, participants circled a contribution amount on a slip of paper,<sup>18</sup> inserted the paper into an envelope labeled with their participant identification number, and then passed the envelope back to the assistant moderator. Payoffs were determined as follows: the total amount contributed to the group pot was multiplied by 1.5 and divided evenly among all six participants, regardless of whether they contributed or not. Thus, the payoff function for each subject  $i$  was:

$$\pi_i = 10,000 - c_i + 0.25 \cdot \sum_{j=1}^6 c_j \quad (3.1)$$

where  $c_i$  is the contribution to the public good (group pot) of subject  $i$ , in any group whose 6 members are indexed by  $j$ . The marginal per capita return (MPCR) from the public good was 0.25. Participants were not informed of the final results of the game until just prior to exiting the facility, after completing a post-survey questionnaire and signing receipts for payment.

A total of 713 subjects participated in the experiment.<sup>19</sup> The average amount earned in the public goods game was \$7.85 USD.<sup>20</sup> The maximum amount earned in the public goods game was \$14.00 USD while the minimum amount earned in the public goods game was \$2.50 USD.<sup>21</sup> For women specifically, the average total payoff from the public goods game was \$7.78 USD, with a minimum earned of \$2.67 USD and a maximum of \$12.17 USD.<sup>22</sup>

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<sup>18</sup>All participants had the option to contribute from 0 to 10,000 LL in increments of 1,000.

<sup>19</sup>The average group size of six participants in our study is in line with standard public goods game designs where groups typically include 3-6 participants (Kurzban, Burton-Chellew and West, 2015, 585).

<sup>20</sup>For reference, the hourly minimum wage in Lebanon is about \$3.78 USD.

<sup>21</sup>In Lebanese currency: the average amount earned in the public goods game was 11,769 LL, with a minimum of 3,750 LL and a maximum of 21,000 LL earned for the full sample of participants. The amount earned in the game was combined with a \$20 USD show-up fee for participation in all activities involved in the experiment, including the discussion portion not analyzed here, to yield each individual's total compensation for participation in the approximately 90-minute study.

<sup>22</sup>For men, the average total payoff from the game was about \$7.89 USD, with a minimum of \$2.50 USD and a maximum of \$14.00 USD.

### 3.4 MAIN ANALYSIS

#### 3.4.1 The distribution of contributions across groups

Before subjecting our data to statistical analysis of the mixed-class group treatment for women, we present some of the descriptive statistics for our main dependent variable: contributions to the public good in mixed-class versus same-class groups. Figure 2 presents the distribution of contributions to the Group Pot by treatment group (same-class versus mixed-class) and by socio-economic class background (poor versus rich) for women's groups only (48 total groups, 24 same-class and 24 mixed-class).

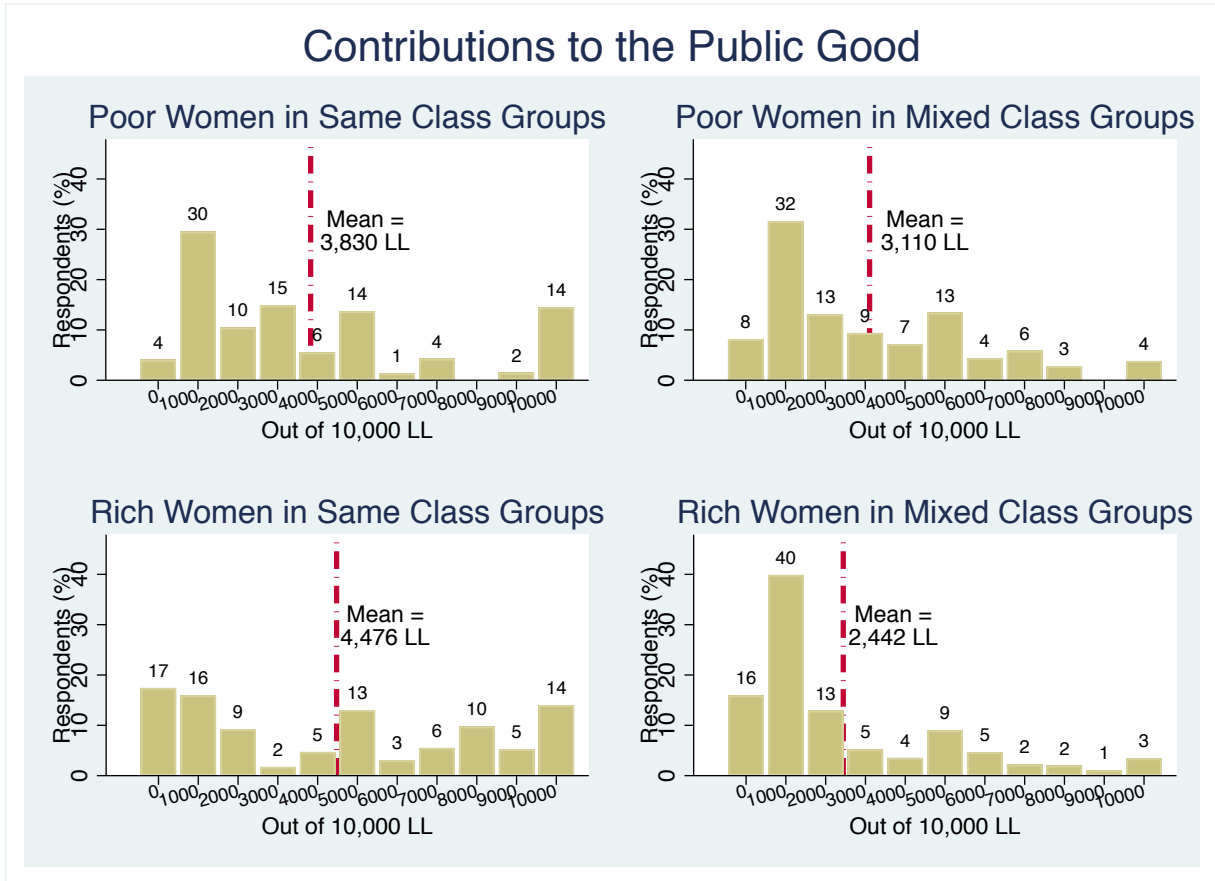


Figure 2: Distribution of contributions to the group pot by class group treatment and socio-economic background, women's groups only.

This initial look at the data suggests that the pattern of contributions to the public good by women varies across same-class and mixed-class group settings and depends on the individual’s socio-economic class. Among rich women, we observe a much higher average contribution in same-class groups compared to mixed-class groups: 4,476 LL in same-class groups compared to just 2,442 LL in mixed-class groups. We observe a similar preference for same-class cooperation among poor women: the average contribution by poor women is higher in same-class (3,830 LL) compared to mixed-class (3,110 LL) group settings. In both instances, the evidence strongly suggests that there is a negative effect of the mixed-class group setting on cooperation among women on average, pointing to the possibility that cross-cutting class cleavages do inhibit cooperation between women.

Additionally, of the four subgroups presented in Figure 2, rich women in same-class groups have the highest mean contribution level, while rich women in mixed-class groups have the lowest mean contribution level. In contrast, poor women are less cooperative in same-class groups than rich women (mean contribution of 3,830 LL compared to 4,476 LL), while they are more cooperative in mixed-class groups than rich women (mean contribution of 3,110 LL compared to 2,442 LL). These patterns suggest that the magnitude of the negative effect of class heterogeneity could be greater for rich women than for poor women.<sup>23</sup>

### 3.4.2 Estimation Strategy

The descriptive evidence suggests that women are not unconditionally cooperative with one another and that socio-economic class cleavages do impact the level of cooperation among women. To confirm this relationship, we also examine our data using statistical models to see how well these results perform when we account for other factors that could have influenced the results. To estimate the effect on cooperation of mixed (versus homogeneous) class group

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<sup>23</sup>Taking advantage of our experimental design, we also investigate whether this pattern holds depending on whether women are making decisions in same-sect or mixed-sect groups. The results are presented in Appendix I. We find that the decrease in average contributions in mixed-class compared to same-class groups holds regardless of the sectarian composition of the groups. This suggests that class cleavages matter for cooperation among women even more so than sectarian/ethnic cleavages.



composition, we employ a weighted least squares regression of the following form:

$$Y_{ij} = \alpha + \beta T_i + X_i' \gamma + \epsilon_i \quad (3.2)$$

where  $Y_{ij}$  is the outcome (i.e. contribution to the Group Pot) for individual  $i$  in group session  $j$ .  $T_i$  is the treatment indicator for whether an individual is in a mixed-class group. The key coefficient of interest is  $\beta$ , which gives the effect of being in a mixed-class versus same-class group on the level of cooperation (i.e. average contribution to the Group Pot).  $X_i' \gamma$  is a vector of individual-level controls included to improve efficiency and control for any imbalance, and  $\epsilon_i$  is the individual level error term.<sup>24</sup> All analysis is performed using weights to account for unequal treatment assignment probabilities across blocks (Gerber and Green, 2012); see Appendix D.4 for more on how the weights were constructed.

We run the analysis for the subsample of 285 women participants in women-only groups to arrive at the average treatment effect (ATE) of the mixed-class group for women overall. Then, to evaluate the impact of the treatment separately for rich and for poor women, we employ the same model specification but limit our analysis to the ATE of the mixed-class treatment for poor women only ( $n = 142$ ) and the ATE of the mixed-class treatment for rich women only ( $n = 143$ ). In a later section, we perform the same analysis on our data from men's groups ( $n = 428$ ) for comparison.

We present the average treatment effect (Model 1) without controls as well as the main estimation (Model 2) which includes a battery of pre-treatment covariates plus an additional indicator for the number of participants in the session<sup>25</sup> and a dummy variable indicating which of the two possible moderators led the discussion portion of the session (moderator fixed effects). Our data preparation closely followed our pre-analysis plan for the larger pre-registered design. We implemented 10 rounds of predictive mean-matching imputation to address a small amount of item-level missingness in pre-treatment covariates. Where measures capture one latent trait of interest, we aggregate them into indices using inverse covariance weighting, which creates an optimal weighted average by weighting-up index

<sup>24</sup>We do not cluster standard errors because treatment was assigned at the individual level (Abadie et al., 2017).

<sup>25</sup>Out of 120 groups, seven completed the experiment with only five participants instead of the required six.

components that provide more ‘new’ information ([Anderson, 2008](#)). All indices, unless noted, were pre-registered. Summary statistics for all variables are in Appendix G. All models incorporate robust standard errors. In Appendix H, we show that our main results are robust to a number of different estimation strategies, including specifications that use strata fixed effects<sup>26</sup> and that control for comprehension of the payoff structure in the public goods game and whether any of the participants claimed to know one another prior to meeting at the study site.

### 3.4.3 Regression results

The initial patterns we observed in the descriptive data for our dependent variable are reflected in the statistical analysis of the average treatment effect of the mixed-class group setting presented in Table 5. For the full sample of women in our study (presented in Row 1 of the table), we observe a statistically significant ( $p < 0.01$ ) negative effect on contributions to the Group Pot in mixed-class compared to same-class groups. On average, across all women in our study, individuals contributed about 1,300 LL less in mixed-class compared to same-class groups. This result holds even after controlling for an array of covariates and moderator fixed effects (see Model 2). This means that women, on average, are about 30% less cooperative in the context of cross-cutting socio-economic cleavages than when cooperating with women from a similar socio-economic background.

Turning to the results for the subgroups of poor and rich women, the results confirm that the negative effect of the mixed-class treatment holds for both rich and poor women in our sample. However, there are some notable differences. First, the negative effect of the mixed-class treatment for poor women is only statistically significant at the 0.10 level in Model 2, where we control for potential confounding variables and moderator fixed effects. In Model 1 (without controls), the coefficient of the mixed-class treatment for poor women is not significant at conventional levels, though the magnitude of the effect is notable and the direction of the effect aligns with the descriptive evidence presented earlier. Poor women,

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<sup>26</sup>For each of the five recruitment cycles, we block randomly assigned participants to treatment groups within strata defined by gender, sect, economic class, and neighborhood, additionally blocking on recruiter where possible.

on average, contribute about 1,000 LL less to the Group Pot in mixed-class compared to same-class groups (as per Model 2).

Table 5: Women's contributions in mixed-class groups overall and by class.

	<i>Same Class Mean</i>	<b>Model 1</b>	<b>Model 2</b>	<i>N</i>
<b>Women overall</b>				
<i>Mixed class</i>	4153	-1374*** (367) 0.000	-1321*** (375) 0.001	285
<b>Poor women only</b>				
<i>Mixed class</i>	3830	-720 (494) 0.148	-971* (534) 0.072	142
<b>Rich women only</b>				
<i>Mixed class</i>	4476	-2034*** (540) 0.000	-1793*** (615) 0.004	143

*\*p<0.10 \*\*p<0.05 \*\*\*p<0.01 Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.*

In contrast to the ATE for poor women, we observe a highly significant ( $p < 0.01$ ) and large negative effect of the mixed-class treatment on cooperation by rich women. In fact, looking at Row 3 in the table, we see that rich women contribute about 2,000 LL less to the Group Pot in mixed-class compared to same-class groups. This translates into rich women cooperating nearly 50% less in group settings that include poor women than in group settings that only involve cooperation with other rich women. Compared to the ATE for poor women, these results suggest a stronger negative effect of class cleavages on cooperation

by rich women than on cooperation by poor women.

On the whole, these results are striking in how strongly they refute the contention that women tend to abide by gendered social role norms of cooperation with one another. Our findings clearly indicate that women are not unconditional cooperators and that class cleavages do impede cooperation between women. These results generally hold for both rich and poor women, though the negative effect of the mixed-class environment is stronger, on average, for rich women.

### 3.4.4 Checking for gender differences in response to class cleavages

However, before we interpret the above results in light of the existing literature, it is worth taking a moment to verify that this is indeed a finding that is rooted in gendered norms of cooperation in group settings. One way to do this is to examine whether the pattern of contributions to the Group Pot in all-male groups differs from what we observed for women. For our results to be attributable – at least in part – to gendered social norms, it should be the case that we observe a different pattern of behavior for men. In this section, we take advantage of the all-male groups embedded in our experimental design to demonstrate that this finding is particular to the women in our study.

Using the same method of statistical analysis as we did for the women’s groups presented above, we produced the average treatment effect of the mixed-class group setting for men overall and disaggregated by socio-economic background (poor men and rich men only). One concern could be that our design does not allow for direct comparisons between men and women given that the group sessions were conducted during different periods of time and at different times of day.<sup>27</sup> However, many of the differences that may exist between

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<sup>27</sup>All-male groups were implemented from January 19th to February 3rd (15 days), from March 2nd to March 22nd (21 days), and from April 6th to April 21st (16 days). Meanwhile, all-female groups were implemented from February 4th to February 26th (23 days) and from March 23rd to April 5th (14 days). The sessions took place at different times of day with a clear correlation between group gender and start time of the session: 58 percent of women’s groups met before noon, while just 12 percent of men’s groups did. This could have affected the type of men and women recruited to participate, as shown in the fact that 56 percent of female participants self-identified as “homemakers” while only 2 men (less than 1 percent of the male subsample) did so.

the men and women in our sample as a consequence of the precise timing of the session during the day would be factors that we would expect to covary with gender in a society as unequal as Lebanon (e.g. employment status).<sup>28</sup> We are most concerned about controlling for factors that do not covary with gender, which we address by again including the full slate of pre-treatment covariates (those used in Model 2 for women) in our analysis of the ATE for men. This allows us to observationally compare men and women in our sample and locate meaningful differences in their patterns of behavior. To the extent that implementing the men’s groups and women’s groups in different sets over time may influence our outcome of interest, we believe this concern is minimized by our having alternated between all-men and all-women sets in implementing our data collection.

Table 6 presents the results for the subsample of men’s groups, as well as the ATE of the mixed-class treatment for the subgroups of poor men and rich men, respectively. The evidence shows that the mixed-class group treatment had the opposite effect on men overall than it did on women. Instead of a negative effect on cooperation, the men in our sample cooperated at significantly higher levels in mixed-class groups than they did in same-class groups. Overall, men in mixed-class groups contribute about 900 LL more in mixed-class settings than they do in same-class settings ( $p < 0.01$ ). Moreover, this positive effect of the mixed-class group setting on cooperation among men generally holds for both poor and rich participants in our sample. There is also no evidence that the magnitude of the positive effect of the mixed-class group differs for rich men compared to poor men: both subsamples cooperate at similar levels, on average, in same-class groups (2,856 LL for poor men compared to 3,359 LL for rich men) and in mixed-class groups (both rich and poor men contribute about 4,000 LL in mixed-class group settings).

This suggests that men are actually more cooperative in mixed-class group settings than they are in same-class group settings, which is precisely the opposite effect of what we observe for women. Additionally, there is comparatively less evidence that this effect varies by socio-economic class for men compared to what we observe for women, where cooperation levels seem to vary by rich versus poor status. Most importantly, this evidence confirms that

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<sup>28</sup>These differences are noted in the summary statistics presented in Table 28 in Appendix G.3.

Table 6: Men's contributions in mixed-class groups overall and by class.

	<i>Same Class</i>	<b>Model 1</b>	<b>Model 2</b>	<i>N</i>
	<i>Mean</i>			
<b>Men overall</b>				
<i>Mixed class</i>	3107	912***	959***	428
		(339)	(348)	
		0.007	0.006	
<b>Poor men only</b>				
<i>Mixed class</i>	2856	902*	1256**	214
		(472)	(546)	
		0.057	0.023	
<b>Rich men only</b>				
<i>Mixed class</i>	3359	922*	818	214
		(486)	(529)	
		0.059	0.124	

*\*p<0.10 \*\*p<0.05 \*\*\*p<0.01 Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.*

there is something specific to gender that is interacting with socio-economic class cleavages in the context of group-based cooperation, since we do not observe the same effect of the mixed-class treatment for both men and women in our sample. This lends credibility to our decision to focus on cooperation and collective action potential across class lines among women in particular.

### 3.5 DISCUSSION AND INTERPRETATION

Overall, we clearly do not observe the unconditional cooperation of women in single-gender group settings anticipated by several recent studies. To be consistent with recent evidence on cooperation between women in public goods settings (e.g. [Fearon and Humphreys \(2017\)](#)), we would have to observe no difference in the level of cooperation in mixed-class compared to same-class treatment groups. Instead, our results suggest that the presence of class cleavages in all-women group settings leads women to cooperate at significantly lower levels than they would in settings where all women share a similar class background. This could suggest that women are prone to same-class bias in cooperation, preferring to cooperate with women from similar socio-economic class backgrounds than with women from different class backgrounds. Notably, the same-class bias we observe for women is present for both rich and poor women, suggesting that class bias influences cooperation among women regardless of socio-economic background. This result is especially pronounced for upper-class women, though we observe a similar direction in the effect for lower-class women as well.

There are at least two ways to interpret this result. One way is to interpret this as evidence of same-class bias in cooperation between women. In this view, women are more motivated to cooperate in same-class settings than in mixed-class settings due to a desire to reward in-group members and punish out-group members. This would be consistent with the view that women (more so than men) care about egalitarian norms and seek to correct perceived imbalance in group settings ([Andreoni and Vesterlund, 2001](#)). The presence of high degrees of wealth inequality may trigger a negative reaction among women if within-gender group norms favor reciprocity and egalitarian principles. In this context, increasing the salience of class heterogeneity could lead some group members to ‘punish’ others by withholding cooperation due to a perceived failure to abide by in-group norms. This would be plausible in a country like Lebanon, where there is a long history of animosity between upper class and lower class women in the context of collective action for group gains.

However, given that we see both rich and poor women cooperate less in mixed-class compared to same-class settings, it is not obvious that a concern for equity is driving this

result. If it were about equity and fairness norms, then we might expect poor women to cooperate less in mixed-group settings, but rich women to cooperate more, thus correcting the imbalance. In actuality, we observe the strongest negative effect of class cleavages on cooperation among rich women. This makes it seem less plausible that women are primarily and unconditionally motivated by gendered social role norms of equity, pro-sociality, and other-regardingness.

A second way to interpret these results is that class cleavages among women are not triggering same-class bias as much as they are cuing women to act on norms of same-class solidarity. Existing evidence supports this interpretation, as [Carpenter, Daniere and Takahashi \(2004\)](#) show that lower-class women may be more cooperative with one another owing to strong norms of cooperation that support collective efforts to secure access to public goods and resources. This could suggest that the potential for collective action capacity among women is high within class groups because women have experience with the benefits of abiding by pro-social norms and sacrificing individual pay-offs for group level gains only when working with similarly situated others. Less cooperation in mixed-class groups, in this interpretation, could merely be a function of increased uncertainty about the norms of cooperation (and at what level one should cooperate) in the context of class heterogeneity. In other words, women want to cooperate with one another, but they are more unsure of the risk involved in mixed-class settings than in same-class settings.

In this view, women are conditional cooperators and shared class group membership provides valuable information to women regarding the likelihood that other women in the group will also cooperate. A vast empirical literature in economics supports the notion that individuals conditionally cooperate in small-group settings ([Fischbacher, Gächter and Fehr, 2001](#); [Fischbacher and Gächter, 2010](#); [Croson, 2007](#); [Kocher et al., 2008](#); [Chaudhuri, 2011](#); [Chaudhuri, Paichayontvijit and Smith, 2017](#)). Conditional cooperators can be altruists (they contribute less as beliefs about others' giving become more optimistic) or reciprocators (they contribute more as beliefs about others' giving become more optimistic) ([Croson, 2007, 2008](#)). More optimistic expectations are typically associated with settings where uncertainty about others' willingness to contribute is reduced. Shared group membership, in particular, is a



prominent feature of the social setting shown to have a positive impact on cooperation ([Chen and Li, 2009](#); [Benjamin, Choi and Strickland, 2010](#)). Priming shared group membership is thought to encourage cooperation by cuing individuals to the existence of a set of shared norms that correspond to shared group membership. In fact, [Yamagishi and Mifune \(2009\)](#) argue that this cuing to the contribution behavior of others – more so than attachment to the shared identity itself – is what drives cooperative behavior. In other words, in-group members expect one another to cooperate more than they expect out-group members to cooperate, so cooperation levels tend to be higher when individuals confront social dilemmas in homogeneous group settings. The negative effect of the mixed-class group setting on contributions to the public good by women could thus be indicative of less certainty about the willingness of other women to contribute in mixed-class compared to same-class settings rather than a desire to harm or punish women from a different class background. This suggests that one way to increase the capacity for women to mobilize across class lines is to reduce the uncertainty present in the decision to cooperate. Policy interventions could target the building of bridges across class lines, focusing on the shared goals of women who come from different class backgrounds.

Yet, while the evidence suggests that reducing uncertainty about willingness to cooperate across class lines may be a way forward, it also points to a potential explanation for why we observe ‘elitism’ in the behavior of upper-class women and how this contributes to barriers in women’s organizing across class lines. In Lebanon and elsewhere, upper-class women, and particularly women in politics, are often accused of being elitist and self-serving rather than acting as representatives of women more broadly ([Tamale, 1999](#)). In fact, evidence from the American politics literature demonstrates that women representatives who enjoy the benefits of their status as ‘tokens’ in a male-dominated political arena are less likely to help other women gain a seat at the table, potentially for fear that doing so would dilute their own influence ([Kanthak and Krause, 2010, 2011](#)). Applying this to our analysis of cooperation among women in Lebanon, we could infer that heightened economic inequality in mixed-class groups raises the potential threat of a relative loss of status for rich women. This could be due to the fear of loss of access to benefits or a consequence of the psychological benefits associated with belonging to a more exclusive subgroup within society ([Brewer, 1991](#)). This

could explain why the negative effect of the mixed-class group treatment on the average level of cooperation by women is so much greater for rich women than it is for poor women. It is plausible that the relatively high level of cooperation between rich women is motivated by a desire to protect their privileged status, a form of class-based solidarity in the face of threat.

At the same time, it makes sense that we do not observe a similarly negative effect on cooperation for rich men in mixed-class settings since their gender group membership is not associated with the same degree of perceived social, political, and economic exclusion as women. Rich men do not stand to risk losing their status in the same way that rich women do. Rather, men's behavior in mixed-class group settings reflects more of what we might expect given the nature of the social hierarchy in Lebanon. For instance, [Wilkinson and Pickett \(2017\)](#) argue that in societies characterized by strict dominance hierarchies, there are incentives for individuals to try to move up the social ladder by gaining favor with higher ranked social superiors, usually those with access to a larger share of material resources. For lower-class men, the positive effect of the mixed-class setting on cooperation could reflect a desire to win the approval of higher ranked (wealthier) men. For upper-class men, greater cooperation in mixed-class settings may derive from a desire to gain or maintain their social status through a display of 'competitive altruism' that seeks to demonstrate their ability to provide for the group regardless of personal cost ([Hardy and Vugt, 2006](#)). Unlike in same-class scenarios where there is no opportunity to gain status in the eyes of higher ranked others, there is an opportunity for men to competitively cooperate and gain social status in heterogeneous class settings.

One reason we do not observe a similar phenomenon in all-women group settings could be due to differences between men and women in terms of how they respond to competition. For instance, women are less likely than men to self-select into competitive environments when other options are available ([Niederle and Vesterlund, 2007](#)), and some evidence suggests that increased competition in group settings has a particularly negative effect on collective action outcomes for women ([Lee, Kesebir and Pillutla, 2016](#)). Some argue that this is the result of institutional and structural inequalities in male-dominated societies that create an environment in which women view other women as rivals, discounting men because of their

innate privilege as members of the dominant gender group in society ([Tanenbaum, 2011](#)). This could explain why the presence of inequality among women has the opposite (negative) effect on cooperation.

Finally, we might interpret these results for cooperation among women in light of recent work by [Klar \(2018\)](#). She argues that the potential for shared gender identity to unite women across salient political divides depends on the extent to which gender entails the same set of values and expectations of behavior for women on opposite ends of that divide. This implies that to the extent that the values and norms of behavior associated with women's gender identity differ along other social identity dimensions, we might not observe high levels of cooperation among women when these other cross-cutting identities are made salient. Our results suggest that socio-economic class cleavages may represent another type of socially salient cross-cutting identity that (like partisanship) overlaps with perceptions of the norms appropriate to women's gender identity in important and substantively meaningful ways. In fact, existing survey data supports this interpretation in the Lebanese context specifically. For example, there is some evidence that attitudes toward gender equality among women vary by income level ([Ceyhun, 2017](#)), and a recent public opinion survey shows that wealthier women hold more positive views of advancing gender equality than poor women ([El Feki, Heilman and Barker, 2017](#)). It is therefore possible that the values and norms of appropriate behavior linked to women's gender identity in Lebanon could vary by class and that raising the salience of class differences in groups of women could enhance the salience of these differences in terms of what women think the norms of appropriate behavior for women in society should entail. In turn, these differences could trigger divisions among women and lead to less cooperation, as we see in our mixed-class group settings. In the absence of the cross-cutting class cleavages, these differences may not be activated.

At the same time, this could plausibly explain why we do not observe the same negative effect of the mixed-class setting on cooperation among men, since the issue of norms of appropriate behavior linked to male gender identity are not salient in the same way. In other words, men are not as likely to be divided along class lines in terms of how they view men's social role in society and what constitutes appropriate behavior for men. Consequently,

increasing the salience of class cleavages within groups of men is unlikely to trigger deep divides along class lines that correlated with attitudes toward male gender identity with the effect of impeding cooperation across class lines.

### 3.6 CONCLUSION

The prevailing view of socio-economic class and its effect on behavior in group settings is that lower-class individuals tend to exhibit more pro-social behaviors than upper-class individuals (for a review, see: [Manstead \(2018\)](#)). More recently, there has been push back on this generalization that points to various mediating factors that exist within socio-economic ranks. At the same time, there is relatively little understanding of what we should expect to observe when social class interacts with other socially salient group identity categories. Given that individuals do not experience social class in a vacuum, it is important to understand whether the social psychological mechanisms thought to drive expectations of behavior in group settings are inconsistent with expectations of behavior associated with other social categories, such as gender. A growing body of evidence suggests that within-gender group differences are an important object of study ([Balliet et al., 2011](#)). [Hyde \(2014\)](#), in particular, identifies the need for more research on gender differences in in-group versus out-group experimental settings, noting a number of theoretical traditions would predict gender differences in response to variation in the group composition of the social setting. Moreover, the implications of detecting gender differences in cooperation are not negligible; even small effect sizes that differ by gender could have a large substantive effect over time because of the nature of gender as an intervening variable ([Balliet et al. \(2011\)](#) cite [Abelson \(1985\)](#) and [Martell, Lane and Emrich \(1996\)](#) on this point).

Our results build on this work to demonstrate that women are not unconditionally cooperative with one another; socio-economic class cleavages have a negative effect on cooperation among women. This result is unique to women, as we observe the opposite effect on cooperation among men. This is consistent with recent evidence that women’s shared gender

identity may not prime norms of within-gender group cooperation in the context of other cross-cutting social cleavages that divide women in important ways (Klar, 2018). In fact, given that other socially salient identities (such as political partisanship) may cross-cut gender and class dimensions of group membership, future research could further explore behavior at these intersections (such as at the intersection of gender, class, and partisanship).

Our findings also underscore the complexity of drawing conclusions based on interactions in shared group settings. They can help explain why results for women's cooperation in experimental settings are so mixed, since researchers do not often take into account the real socio-economic class background of study participants when interpreting outcomes. While we recognize it may not be possible to control for every possible factor in a single research design, scholars need to be cognizant of how the interaction between gender and various dimensions of individual identity (such as class) could jointly determine behavior and influence how we interpret our findings. In this respect, we seek to echo the work of Crenshaw (1991) and others who point to all the ways that an individual's multiple social identities intersect to influence attitudes and behavior. These results lead us to caution against treating either class identity or gender identity as discrete social categories. The interaction between them clearly primes different social norms and leads to different behavioral outcomes.

The potential policy implications of our results include the proposition that organizing women to mobilize for policy change depends on reducing barriers to cooperation across class groups. In the Lebanese case, the lack of effective mobilization among women for policy change that targets women as beneficiaries – such as with respect to policies that would change the fractured system of personal status laws or lead to reserved seats for women in public office – is a byproduct of the cleavages introduced by raising the salience of socio-economic class identity among women. If within-class group cooperation between women is the norm, then there is little reason to expect that poor women would associate policy initiatives linked to the preferences of elite or upper-class women – such as gender-based quotas for political representation – as worthwhile. Similarly, it is not obvious that rich women would see obvious benefits to advocating for more egalitarian policy initiatives that could negatively impact their relationship with male elites (who themselves may be

more interested in maintaining the status quo).

Our evidence confirms that socio-economic class-based cleavages are a barrier to collective action among women, but it does not necessarily provide a clear path forward for addressing this issue. Future research could explore the relative effectiveness of cross-class versus within-class efforts to mobilize women on behalf of broad policy changes. This could also include efforts to explore whether certain policy initiatives receive more widespread support than others and whether these victories could help bridge the gap between women of different class backgrounds.

## 4.0 WOMEN CANDIDATES, ELECTORAL COMPETITION, AND THE INCENTIVE TO PRIORITIZE WOMEN CONSTITUENTS: SURVEY DATA FROM WOMEN POLITICIANS IN WESTERN UGANDA

### 4.1 INTRODUCTION

Under what conditions do quotas for women’s representation in politics improve the substantive representation of women constituents?<sup>1</sup> A large body of research on gender-based quotas suggests that the connection between women representatives and the substantive representation of their women constituents’ priorities is quite strong. Even in the most difficult cases, such as in clientelistic or patriarchal systems where women are historically excluded from influencing policy-making through (predominantly male) institutions, reserved seats for women in office are shown to improve women’s access to the distribution of resources through political elites (Benstead, 2016). As well, increasing the number of women in local government is associated with policy-making that is more likely to address the demands of women constituents (Chattopadhyay and Duflo, 2004; Kudva, 2003), and research across various country contexts shows that women representatives are more likely than their male colleagues to prioritize policy issues that are frequently associated with women’s interests (Braga and Scervini, 2017; Clayton and Zetterberg, forthcoming). On the whole, the literature on gender-based quotas largely demonstrates that women who succeed in reaching office under quota-based systems of representation do a better job than male representatives

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<sup>1</sup>This project was made possible through a collaborative effort with the Centre for Women in Governance. I am sincerely grateful to Joy Mukisa for her enthusiastic support of this research, and to Julian Basemera and Gloria Ayesiga for their excellence research assistance. This project is covered under the IRB of the University of Pittsburgh: PRO16040496.

at substantively representing their women constituents.

At the same time, however, other evidence demonstrates that quota seats for women in elected office are subject to elite capture under certain conditions. For instance, despite being praised as an early adopter of quotas for women, Uganda's political system has been widely criticized for promoting women candidates to fill reserved seats who are "unrepresentative of the female population and too closely allied with the ruling party to effectively challenge its patriarchal agenda" [Josefsson \(2014, 94\)](#). In fact, some evidence suggests that in semi-authoritarian regimes or those democracies – like Uganda – where a single political party exerts primary influence over the electoral process, introducing quotas for women may be a tactic to consolidate the power of the ruling party in electoral areas where party leaders can largely control which candidates ultimately win office ([Weeks, 2018](#); [Muriaas and Wang, 2012](#); [Clayton, Josefsson and Wang, 2017](#)). In these settings, party leaders face strong incentives to support women candidates for reserved seats who have strong ties to the party and demonstrate a willingness to abide by norms of behavior that reinforce the status quo distribution of political power.

While there is broad agreement in the academic and practitioner communities that elite capture of quota seats for women is problematic, the extent to which these seats are taken by politicians who neglect the interests of their women constituents (the very group whose political participation the quota is designed to encourage) is rather unclear. On the one hand, there are good reasons to think that women candidates in party strongholds will be more beholden to existing political party elites than to their constituents more broadly and could therefore adopt clientelistic strategies of representation that maintain the status quo of catering to existing political elite interests once in office. On the other hand, if a candidate is virtually guaranteed to win given the support of the dominant party in a stronghold, then the relative lack of electoral accountability could allow her to use her position to direct resources to traditionally marginalized groups in addition to party elites, such as women or youth. In this sense, clientelism could still dominate patterns of representation, but the beneficiaries could be just as likely to include historically marginalized groups as long as this is consistent with the ruling political party's agenda. This contrasts with the situation faced by women



candidates in more competitive electoral settings where accountability to a wider range of stakeholders with the ability to influence the outcome of the electoral process (beyond party elites) could incentivize candidates to cater to a broader range of constituent groups, or even to adopt a more universalist perspective on representing the community as a whole.

In this essay, I explore whether the constituent groups prioritized by women candidates seeking quota seats varies with the degree of competition candidates face in the broader electoral environment. One limitation of existing research on gender-based quotas is that it tends to concentrate on the behavior or characteristics of women once they are elected to office, overlooking the potential for the attitudes or behavior of women candidates to provide insight into the conditions under which quotas are most likely to lead to collective gains for women in society as a whole. Since the constituent groups women plan to prioritize once in office could affect whether they receive a political party nomination and make it onto the general election ballot in the first place, it is important to examine whether there are patterns among candidates and not only patterns among representatives. This is an important issue to investigate since it could shed light on the presence of additional institutional barriers to the effective representation of women's interests on a broad scale. If women candidates for reserved seats in party strongholds are more likely than women in competitive areas to prioritize the distribution of resources to various client groups in exchange for political support – such as political elites or close peer networks – then this suggests that implementing quotas in the absence of a competitive electoral process could merely reinforce or entrench existing patterns of clientelism rather than lead to greater gender equality in access to the political process overall. Alternatively, if women candidates in party strongholds intend to use their position to redirect resources toward more marginalized groups – such as women, youth, or the otherwise physically vulnerable – this could suggest that quotas can enhance political access for traditionally marginalized groups even when the leadership of a single political party largely controls which women hold these seats.

I evaluate these predictions using original survey data collected from a non-random sample of 157 women candidates running for office across 27 constituencies in the Western Region of Uganda in 2016. My findings suggest that women candidates do vary in the elec-

toral strategies they emphasize depending on the competitiveness of the electoral process. While a commitment to prioritizing the needs of women does not vary across electoral settings, women candidates in less competitive party strongholds are more likely to prioritize the needs of constituents linked to clientelistic patterns of representation, such as friends and family, those in the same religion, and those in the same clan or tribe, than are women in competitive electoral areas. I contrast these results with preferences for prioritizing ‘all people in the community’ and find that the probability of prioritizing the interests of all people (a more universalist approach) increases significantly as the electoral environment becomes more competitive. My results largely support arguments from feminist scholars that policies presumed to enhance inclusion, such as gender-based quotas, may only serve to reinforce gender inequities in political participation if implemented in the absence of larger institutional reforms designed to give men and women equal access to the tools needed to effectively and independently participate in political decision-making ([Pateman, 1988, 2011](#); [Task Force on Democracy, Economic Security, and Social Justice in a Volatile World, 2011](#)). I return to this discussion in the conclusion.

## 4.2 COMPETITION, POLITICAL INCENTIVES, AND CONSTITUENT REPRESENTATION

There are many factors that could influence the types of constituent groups that women politicians plan to prioritize if elected to office. This paper focuses on one feature of the electoral environment that could plausibly influence women candidates’ priorities: the level of competition they face in getting elected. This represents an important departure from other research that focuses on women candidates’ characteristics (e.g. [Josefsson \(2014\)](#)), such as their partisanship, level of education, or ethnic affiliation as factors that could explain behavior once in office. I seek to control for many of these individual level factors and instead consider how the broader institutional environment could influence women candidates’ electoral strategies in competing for reserved seats. Drawing on existing literature, I find

that there are good reasons to expect that whether women candidates plan to prioritize the interests of groups linked to traditional notions of clientelistic politics (such as co-partisans, political party elites, coethnics, or close friends and family), or more marginalized groups typically excluded from male-dominated networks of resource distribution (women, youth, the disabled or otherwise physically vulnerable), or instead adopt a more universalist approach to representing all people in their community, could depend on the extent to which the political process is dominated by a single political party. At the same time, I emphasize the exploratory nature of this analysis since much of the literature generally suggests competing expectations of how competition ought to affect candidates' priorities.

#### **4.2.1 Non-competitive electoral environments**

Non-competitive electoral areas are typified by political party strongholds where the slate of candidates appearing on the ballot is heavily influenced by the dominant party's leadership. In general, much of the gender and politics scholarship is critical of the potential for women holding quota seats in these settings to do much beyond further consolidate the patronage networks that typically benefit a predominantly male political elite ([Josefsson, 2014](#)). In fact, recent evidence suggests that political party elites tend to support the introduction of gender-based quotas precisely when they have a strong enough monopoly within a given electoral area to control the candidate selection process, thereby ensuring that those women candidates approved by the party elite win office and help consolidate the party's control over political decision-making within the area ([Weeks, 2018](#)). These findings bolster long-standing concerns that reserved seats for women in electoral systems dominated by a single political party are subject to elite capture, reducing the potential for women to be elected under quota systems who are motivated to serve the interests of anyone outside of the ruling political elite ([Tamale, 1999, 2003](#); [Tripp, 2006](#)).

This capture of quota seats in party strongholds is often made possible by the fact that a single political party dominates the electoral landscape through deep patronage networks and clientelistic relationships with key constituent groups. To maintain control over a given electoral area, party leaders may engage in vote-buying or seek to channel goods and services

toward loyal supporters ([Corstange, 2016](#)). Yet, these clientelistic practices are expensive and research shows that women politicians are systematically disadvantaged from participating in these networks to the same extent as their male colleagues. In many societies characterized by widespread gender inequities, women politicians generally lack the ability and opportunity to access many of these clientelistic networks of resource distribution because of structural inequalities that prevent women from amassing financial or social capital to the same extent as their male colleagues ([Benstead, 2016](#)), or because of social norms of appropriateness linked to gender that bar them from entering many of the informal spaces where this kind of politics takes place, such as bars or gambling halls ([Beall, 2005](#)). This suggests that it should be difficult for women candidates to emerge in party strongholds and succeed in winning office without the support of the dominant party leadership in the area, since it is highly unlikely that an independent woman candidate could mount an effective opposition against such a formidable political machine. This creates an environment where women seeking reserved quota-based seats may become overly reliant on strong party regimes for electoral support.

I expect that it is more likely that party elites will choose to support women candidates they know will reinforce their agenda once in office. This creates incentives for women candidates in party strongholds to prioritize the interests of political party elites as a key electoral strategy necessary to secure the party's nomination and electoral support. To the extent that the priorities of party leaders and women constituents do not align, this could have a negative effect on the substantive representation of women in the community, broadly speaking. This could occur, for instance, if women candidates for reserved seats are less likely to advocate on behalf of issues that matter to women in the community but that do not align with the party's agenda ([Bauer, 2008](#); [Tripp, 2006](#); [Walsh, 2012](#); [Clayton, Josefsson and Wang, 2017](#)). In this case, relative to competitive electoral environments, I expect to observe a stronger preference for prioritizing the interests of political elites among women candidates in party strongholds, consistent with expectations that party elites will want to maintain networks of patron-client relationships and use quota seats for women to further consolidate their influence over the populace at large.

At the same time, it is also possible that political party leaders in stronghold areas face incentives to support women candidates who contribute to the party's ability to maintain a monopoly in the area. One way to do this may be to support the candidacy of women who represent socially salient constituent groups in the region that are already part of existing clientelistic networks of the distribution of resources. For instance, qualitative evidence gathered by the author suggests that elected officials may be selected to participate on elite committees within local legislatures, in part, on the basis of their membership in other socially relevant groups, including religious, ethnic, and tribal groups.<sup>2</sup> This is consistent with results presented by other scholars in the field who show that, in societies characterized by the clientelistic distribution of resources, "attributes such as familial ties, voter mobilization, or benefactor loyalty [can be] more salient than gender identity in candidate selection" (Franceschet, Krook and Piscopo, 2012, 237). Promoting candidates who 'check the right boxes' can go a long way toward ensuring continued public support by enhancing perceptions of the ruling political elite as upholding promises to direct the flow of resources toward politically relevant groups. In this context, I also expect that women candidates may be more likely to show preferences for prioritizing the needs and interests of strategic constituent in-groups with ties to clientelism and the strategic distribution of resources to supporters, such as coethnics, members of the same clan or tribe, members of the same religion, or close friends and family. This could be especially likely for women candidates who perceive their role as one of reinforcing existing patronage networks in line with reinforcing the ruling party's control over the area. This would be consistent with evidence that it is not the case that women are any less corruptible than men, but simply that they have fewer opportunities to engage in the same patterns of clientelism as men (Goetz, 2007). Afforded these opportunities, women candidates may be every bit as likely to direct resources to those same types of groups linked to clientelistic patterns of behavior. However, this does not necessarily imply that women candidates in party strongholds will not be interested in prioritizing the needs of historically marginalized groups, such as women, youth, or the disabled or physically vulnerable. Rather, it suggests that women candidates face trade-offs in terms of how

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<sup>2</sup>Interviews and focus group discussions with women representatives in local government. Western Region. Summer 2016.

they direct their limited time and resources.

One possibility is that women politicians in less competitive areas may choose to direct their attention to historically marginalized groups with cross-cutting membership in social groups that are considered most relevant to maintaining the political status quo. While this suggests that we might not expect women candidates in party strongholds to prioritize women voters in a broad sense, it does mean that they could prioritize women voters in a narrow sense, such as coethnic women voters or women who belong to the same religious group. In other words, it could be that party strongholds create incentives for women candidates to direct the flow of resources toward historically marginalized groups and not only toward political party elites. In fact, [Benstead \(2016\)](#) shows that quota-elected women in patriarchal settings with little multiparty competition provide more legislative clientelism to women voters than either male legislators or women elected through unreserved seats. This is an important counter-narrative to consider given that it suggests quotas can be useful for giving women access to the clientelistic distribution of resources where they might otherwise be excluded from the system entirely. As a result, I expect that women candidates in party strongholds may use their position to represent the interests of historically marginalized groups with the caveat that this is unlikely to entirely substitute for representing the interests of historically dominant social groups who largely control the candidate selection process through clientelistic networks of political patronage.

#### **4.2.2 Competitive electoral environments**

Overall, then, I expect women candidates in less competitive areas to be more likely to prioritize the needs of particular constituent groups linked to historical patterns of clientelism rather than to show a preference for universally representing the interests of the community as a whole. This raises the question: *why might electoral competition alter these dynamics?* By definition, in competitive electoral settings, no single party can entirely control the outcome of the electoral process. Competition for votes creates incentives for candidates to appeal strategically to a broader base of the voting public and not only to rely on support from association with the dominant party regime. In fact, recent evidence suggests that the

incentive to appeal to a wider range of constituent groups with influence over the outcome of the election is what drives women representatives holding reserved seats to engage in policy-making that crosses party lines and may even deviate from the ruling party's primary political agenda (Clayton, Josefsson and Wang, 2017). This implies that competition creates incentives for women candidates to appeal to a broader base of constituent groups than they might otherwise in the absence of competition, such as when party leaders largely control the slate of candidates available to voters.

This could suggest that women candidates in competitive electoral settings will choose to emphasize the needs and interests of constituent groups who are historically marginalized from the distribution of resources through clientelistic networks. One possibility is that women candidates in more competitive areas will be more likely to appeal to women voters in particular. For instance, Dolan (2010) shows that women candidates who take more pro-women stances and are thereby viewed as 'acting for' women are more likely to elicit same-gender voting support than women candidates who are only seen as 'acting as' women. Moreover, some evidence suggests that women elected to quota seats perceive a stronger mandate – by virtue of their position as a 'women's representative' – than either non-quota women or male representatives to direct the flow of resources toward women voters in particular (Benstead, 2016). This suggests that women candidates seeking quota seats reserved for women could be more likely to view their role as partially one of prioritizing their women constituents.

Relatedly, if women candidates perceive an electoral advantage to catering to the interests of women more broadly, this could extend as well to serving constituent groups who are historically linked to women's social role in society, such as youth and children or the disabled or otherwise physically vulnerable. This could partly explain why examples of successful policy outputs in the wake of adopting quotas for women representatives in national legislatures frequently include laws targeting domestic violence, the protection of children, and human trafficking (Muriaas and Wang, 2012; Wang, 2013). This suggests that in the absence of strong incentives to strictly adhere to the agenda of a dominate party elite, women politicians in more competitive electoral environments may strategically opt to prioritize the

interests of women, youth and children, or other vulnerable population groups.

However, when quota seats for women are filled through universal suffrage, this creates incentives for women candidates to avoid alienating the interests of male voters. This suggests that, to some extent, women candidates may see value in adopting a more universalist approach to representation in competitive constituencies. In this case, women candidates may want to target the interests of all members of the community as a whole rather than targeting only specific constituent groups. This kind of behavior would suggest a strong deviation from clientelistic patterns of resource distribution. On the other hand, it is also possible that the incentive to appeal to men in competitive settings will encourage women candidates to prioritize the interests of select in-groups whose membership crosses gender lines, such as ethnic, clan, or religious groups, or even political party groups. In this case, appealing to key constituent groups that consist of both men and women members could be an effective electoral strategy. This suggests that under certain conditions women candidates in competitive area may show similar preferences for clientelistic representation as women in party strongholds. The two major differences in competitive areas are (1) that there could be stronger incentives to make universalist appeals than what the literature suggests would be the case in strongholds, and (2) the types of groups candidates choose to prioritize in competitive areas are less likely to be predominantly determined by the preferences or agenda of ruling party elites.

#### **4.2.3 Summary of expectations**

On the whole, I expect that women candidates in party strongholds will prioritize constituent groups consistent with existing patterns of clientelism that reflect status quo political elite interests in maintaining electoral dominance. This should include prioritizing the interests of political party elites, as well as members of other politically salient social groups through which resources may reasonably be expected to flow in order to maintain political support, such as coethnics, members of the same clan, tribe, or religious group, or close social networks of friends and family. At the same time, women candidates may be influenced by the culture of clientelism in party strongholds to redirect resources to historically marginalized



groups in a display of buying support for the dominant party regime. In contrast, I find that the expectations for women candidates in more competitive electoral settings are decidedly less clear. On the one hand, I expect that women in more competitive electoral environments could be more likely to adopt a universalist approach to representing all members of the community as a whole rather than appealing to clientelistic strategies of prioritizing the needs of particular groups in exchange for support. On the other hand, I expect that greater competition could lead women candidates in competitive settings to make more targeted appeals with an issue-centered message designed to attract constituent groups who have been historically marginalized in the political decision-making process. Competition allows accountability at the ballot box, so candidates face incentives to prioritize the needs of constituent groups who might not necessarily be at the top of the agenda for political party elites who otherwise control the candidate selection process in the absence of electoral competition.

### **4.3 WOMEN REPRESENTATIVES AND ELECTORAL POLITICS IN UGANDA**

I evaluate these predictions using attitudinal data collected from women candidates for reserved seats in local government in Uganda, a country with gender-based quotas for representation and a dominant ruling party that maintains control over the majority of local electoral areas but faces more electoral competition in some settings. I concentrate on the case of Uganda because it is a prime example of the larger puzzle of the conditions under which greater descriptive representation for women in government translates into better substantive outcomes for women on the ground. Frequently cited as a success story in terms of setting gender-based quota goals and actually reaching them, Uganda first established reserved seats for women in government in 1995.<sup>3</sup> Women are guaranteed roughly one-third of

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<sup>3</sup>Quotas are included in Article 180(2:b) of the 1995 Constitution, which states that one-third of each local government council shall be reserved for women, and in Article 108(3) of the Local Governments Act of 1997, which also requires that women constitute one-third of any local council ([The Quota Project, 2017](#)).

all seats in all legislatures from the national level in Parliament to the district level council, all the way down to the sub-county level council (the lowest administrative unit with significant autonomy in decision-making). As of December 2016, Uganda's 34% representation for women in Parliament placed it 30th worldwide for the share of women in the national legislature, far out-pacing the average for Sub-Saharan Africa of 23% ([Inter-Parliamentary Union, 2016](#)).

Since the introduction of quotas for women's representation, Uganda's Parliament has passed several high-profile pieces of legislation designed to improve outcomes for women around the country, including: the Equal Opportunity Commission Act (2006), the National Equal Opportunities Policy (2006), the Penal Code (Amendment) Act (2007), the Prevention of Trafficking in Persons Act (2009), the Prohibition of Female Genital Mutilation Act (2010), and the Domestic Violence Act (2010). These legislative successes are often cited as evidence of the substantive policy impact of having greater descriptive representation for women in Uganda's political system ([Muriaas and Wang, 2012](#); [Wang, 2013](#)). Moreover, recent research confirms that women Members of Parliament (MPs) in Uganda are more vocal representatives of "historically feminized" issues (sometimes referred to as "women's issues") than their male counterparts ([Clayton, Josefsson and Wang, 2017](#)).

Yet, despite the clear positive impact of increased descriptive representation for women in Parliament on the substantive representation of women's interests through the adoption of gender-sensitive legislation, many recognize that the standards enumerated in these laws have yet to be fully realized. For instance, research shows that after more than two decades of quota-driven representation for women in government, women's political empowerment has improved while women's level of economic participation, rate of educational attainment, and key measures of health and survival have all declined relative to men ([The World Economic Forum, 2015](#)). In a series of interviews conducted by leading Ugandan civil society organizations (CSOs) and academicians, women MPs attributed this failure to the absence of implementation at the local level, decrying the lack of training and sensitization for the local representatives and local officials charged with overseeing the implementation of national legislation ([Center for Women in Government and Civil Society Rockefeller et al., 2014](#)). This

gap in leadership on gender issues at the local level (in contrast to the progress on gender issues at the national level) is puzzling because similar quotas for women's representation exist at both levels, drawing attention to the question of why greater substantive representation for women at the local level has not followed from greater descriptive representation in the same way that it has for women in national politics.

Some scholars attribute the disconnect between increased descriptive representation and substantive gains for women on the ground to elite capture of women's quota seats (Bauer, 2008; Tripp, 2006; Walsh, 2012). The case of the National Resistance Movement (NRM) in Uganda is no exception (Clayton, Josefsson and Wang, 2017, 283): "In Uganda, the ruling National Resistance Movement (NRM) party implemented quotas in 1989 as part of a wider strategy to ensure regime stability and strengthen support among various social groups. As such, the Ugandan quota system has been criticized for creating a group of women more beholden to the political regime than accountable to female citizens (see e.g., Goetz and Hassim (2003); Tamale (1999); Tripp (2000, 2006))." In fact, Sylvia Tamale – a prominent academic and critic of Uganda's quota system – once argued that quota seats were offered to women by the ruling NRM as an inducement that would provide "access to the political world of male power" without actually requiring party elites to make improvements that would advance the status of women in society (Tamale, 2003). In the early years of the Women's Movement in Uganda, it was not uncommon for these seats to be filled entirely by women who were asked to run by male elders or male party elites (Tamale, 1999), while the NRM is widely believed to use the creation of additional subnational administrative units (local government councils) as a political tactic to increase electoral strength and deepen patronage networks (Green, 2010; Muriaas and Wang, 2012; Clayton, Josefsson and Wang, 2017). To the extent that the NRM can control which candidates reach office in these new electoral areas, there is a high likelihood that the candidates who emerge in those contests will be those with deep ties to the ruling party establishment and whose representation priorities are consistent with those of the NRM leadership.

On the whole, this suggests that Uganda represents a prime example of how party strongholds may be used to consolidate the power of a dominant political party, creating

incentives for women candidates seeking office in these settings to cater to the interests of powerful party elites rather than broader swaths of the electorate. At the same time, sub-national variation in the level of competition faced by women candidates for office yields a window of opportunity to study the independent effects of the electoral context on women candidates' priorities for representation that does not exist in the more competitive national elections. Additionally, as an example of a gender-based quota system, Uganda also presents an important opportunity to evaluate the normative implications of promoting quota-based systems of representation in institutional environments where there may be institutional barriers in the broader political system that make it difficult for women politicians to act in ways that deviate from status quo norms of clientelism and in-group favoritism in representation.

## **4.4 RESEARCH DESIGN AND DATA COLLECTION**

### **4.4.1 Overview**

I evaluate the relationship between the level of electoral competition in the broader political environment and the constituent groups women candidates intend to prioritize using data from an original, self-administered survey of 157 women candidates for local office in 27 constituencies across 10 districts in the Western Region of Uganda. I draw on survey data collected from women candidates for office rather than from women representatives who have already succeeded in winning office. This is a substantive distinction with a theoretical motivation behind it. By using data from women candidates across constituencies that vary in their competitiveness, I can get a broader picture of how the incentives to prioritize different groups vary among the full slate of women contesting for office and not only those who ultimately won. This is important because it could be the case that representatives who win systematically differ from those who do not. By using data from candidates who vary in terms of whether or not they won election, I can get a better sense of the general pattern of representation priorities across all women candidates who were options for voters in the general election.

In this section, I review how the survey data was collected and important features of the non-random sample of women candidates who responded to the survey that matter for interpreting the results of the analysis. In the interest of full research transparency, I emphasize that this study is intended as a preliminary, exploratory investigation of the hypothesized relationships in the data. There are some notable limitations to what can be inferred from the evidence presented here owing to some concerns about data quality and reliability as well as the limited sample size and limited geographic coverage in the sample. Still, it is highly unusual to have access to opinion data from women candidates for office as compared to women representatives already serving in office. Moreover, there is extremely limited data on women politicians seeking office at the local rather than the national level in developing contexts, such as Uganda. As such, this data is unique and affords the opportunity to explore some of the more interesting patterns in women candidates' representation priorities in the interest of motivating future research in the area.

#### **4.4.2 Survey implementation**

The survey questionnaire was implemented approximately one month after the conclusion of the primary election season, from November-December 2015, during a series of two-day training exercises conducted by the Centre for Women in Governance (CEWIGO), a Ugandan-led non-governmental organization whose mission is to improve policy-making for women. All candidates who attended the trainings were invited to complete the questionnaire.<sup>4</sup> After the general elections in February and March 2016, respondents from the survey were matched to the official election results list published by the Ugandan Electoral Commission to confirm that the sample of women surveyed during the training exercises did in fact compete in the

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<sup>4</sup>The first part of the survey was self-administered to 358 women in 10 districts, while the second part was administered to 318 of those same women in 8 of the 10 districts; post-training surveys were not implemented in Kabarole or Kasese. While 318 women completed both parts of the questionnaire, only 229 of those women were candidates for women's reserved seats on local councils. The remainder largely consisted of women serving on lower level councils that were not up for election in 2016. Of the 229, only 157 answered the survey question pertaining to the main outcome of interest, thus resulting in the reduced sample used here for analysis. Very few women competing for unreserved seats in direct elections against men attended the trainings, making it impossible to compare between women candidates for quota seats and those competing for open/unreserved seats.

general election in 2016. The survey data was collected using a single instrument divided into two parts.<sup>5</sup> To offset the potential for social desirability bias to influence individuals' responses, all data used in this analysis was collected prior to the start of the training workshop. The only two survey questions from the post-training survey included in this analysis are not measures that should be expected to change as a result of the training experience, namely: two subjective measures of socio-economic background. Since I cannot distinguish between respondents who may have attended CEWIGO trainings prior to the study period, it is still possible that responses could be biased for individuals who are familiar with CEWIGO's training content and have a general idea of the types of responses that would be looked on favorably by staff members. However, even if this were true, it would bias against finding any differences in representation priorities given the level of competition faced.

In total, data are available for 157 women candidates who completed self-administered surveys and contested for a reserved seat in the 2016 general election at either the sub-county (LC3), municipal (LC4), or district (LC5) level. The data collected includes a rich set of covariates and demographic information, including age, ethnicity, religious affiliation, economic well-being, education, literacy, and English language fluency, among others. There are also questions measuring attitudes toward representation as well as attitudes toward the gendered dimensions of policy-making and policy priorities. Both parts of the survey began with a consent script informing all participants of the purpose of collecting this data, how it would be used, that their identity would be protected, that there were no risks to answering these questions, and that they were free to skip questions or stop at any time. The survey instrument was drafted and administered in plain English with the understanding that the trainings would be conducted in English and the local language of each district where the training was carried out. The training teams were instructed to help in answering questions and clarifying terms as needed while allowing each participant to fill out the questionnaire on her own. The training teams were also instructed to translate as necessary on the spot as participants filled out the forms individually to protect the privacy and anonymity of each

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<sup>5</sup>The first part was implemented immediately prior to the start of the first day of the two-day workshop training, while the second part was administered at the end of the last day of the training. The survey was divided into two parts to accommodate more questions under a tight timeline for implementation.

respondent's answers.<sup>6</sup>

### 4.4.3 The non-random survey sample

The survey respondents represent only a small fraction of the total number of women who competed for reserved women's seats at the local level in the 10 study districts in the 2016 elections, as shown in Table 7. According to statistics published by the Ugandan Electoral Commission, these 10 districts also only represent a small fraction of the 8,199 total reserved women's seats available at the LC3, LC4, and LC5 levels in the 112 districts around the country, for which 14,219 women competed in 2016. As the survey respondents represent a non-random sample of the population of women competing in 2016, all results presented here should be viewed in light of the fact that this convenience sample of women candidates is not representative of all the women who competed in the study districts. Nevertheless, there are good reasons to believe that valuable insights can still be gleaned from observational analysis of these women's responses to the questionnaire. I review some of the factors that may distinguish the respondents who attended the training from the larger population of women competing for office in the study districts. This helps put the results in perspective and gives a better framework for generalizing beyond this set of responses.

Initially, CEWIGO sought to prioritize inviting women to the workshop who were competing for open seats in direct elections against men. However, this narrow focus proved too challenging for implementation, as very few women contested in open seat, direct elections at the local level. This complicated the recruitment process, and led to a number of last-minute efforts to gather the targeted 50 women for participation in each district. The fact that CEWIGO did not originally target women competing for reserved seats could help explain why there is considerable variation in the share of the population present in the sample across districts and levels of office (e.g. 56% of the candidates for LC5 in Isingiro

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<sup>6</sup>The descriptive statistics for the sample indicate that only 69 out of 157 respondents indicated full fluency in English. In Appendix P.1 I check the sensitivity of the results by restricting the sample to only those candidates fluent in English. The main results for the effect of competition on constituent groups prioritized does not change in any significant way. This helps offset some of the concerns related to data quality and reliability given the method of survey administration.

Table 7: Survey sample compared to the total population of women candidates for reserved seats in the study districts.

2016 Election Candidates for Reserved Seats for Women Representatives on Local Councils									
District	LC3			LC4			LC5		
	<i>Sample</i>	<i>Pop.</i>	<i>% of Pop.</i>	<i>Sample</i>	<i>Pop.</i>	<i>% of Pop.</i>	<i>Sample</i>	<i>Pop.</i>	<i>% of Pop.</i>
Bushenyi	16	92	17%	–	21	0%	5	21	24%
Ibanda	9	80	11%	–	–	–	7	17	41%
Isingiro	5	97	5%	–	–	–	10	18	56%
Kabarole	8	188	4%	5	17	29%	5	37	14%
Kamwenge	15	91	16%	–	–	–	4	14	29%
Kasese	3	271	1%	–	23	0%	2	39	5%
Kiruhura	8	96	8%	–	–	–	2	15	13%
Kyenjojo	21	130	16%	–	–	–	2	20	10%
Mbarara	10	130	8%	4	34	12%	2	19	11%
Sheema	10	78	13%	–	–	–	4	10	40%
<b>Totals (10 study districts)</b>	<b>105</b>	<b>1,253</b>	<b>8%</b>	<b>9</b>	<b>95</b>	<b>9%</b>	<b>43</b>	<b>210</b>	<b>20%</b>
<b>Totals (112 UG districts)</b>	<b>LC3 Candidates</b>		11,056	<b>LC4 Candidates</b>		1,024	<b>LC5 Candidates</b>		2,139
	<b>LC3 Seats</b>		6,867	<b>LC4 Seats</b>		373	<b>LC5 Seats</b>		959

District completed the survey, compared to just 5% of the LC5 candidates in Kasese District). Notably, a relatively larger share of LC5 candidates were surveyed and included in the sample compared to LC3 and LC4 candidate groups. This makes sense in the case of LC3 compared to LC5 women, since there are far fewer total LC5 candidates for office. However, the relatively higher shares often mask lower numbers of women included in the sample from each district (e.g. only two LC5 women were surveyed from Kyenjojo, which translates to 10% of all LC5 candidates in Kyenjojo overall). This introduces the possibility that sampling bias could skew the results at the district level and impede interpretation and abstraction to the larger population of interest. I try to address this concern by controlling for the level of office contested in the main statistical analysis.

Additionally, the method for recruiting participants to the trainings – and thus to filling out the surveys – offers some insights into how the sample might differ from the broader population of interest. CEWIGO designed the workshop intervention to expose the women



candidates competing in the general election to the training content as early in the campaign process as possible. The goal was to gather all primary election winners just after the primary elections and be able to train them to more effectively compete in the general election. Potential workshop participants were identified by CEWIGO from lists provided by the political parties through heads of women's leagues and district volunteers. These two groups compiled lists using information from political party offices as well as special knowledge of those planning to contest as Independents and forwarded these names to CEWIGO. As a result, eligible workshop participants included winners of political party primary races and well-known Independents, where the goal was to train approximately 50 women candidates in each of the 10 districts. In each district, once CEWIGO had commitments from about 50 attendees, they stopped recruiting additional participants.

This method of recruitment suggests that women who were better connected to local political networks were more likely to be invited to participate in the training workshops, and thus to complete the surveys. Because CEWIGO relied on communication from local party leaders and local organizations, it is more likely that the names provided to CEWIGO included the names of women supported by and known to these organizations. This suggests that the women in the sample are more likely to be politically connected than those in the broader population. This conjecture finds some support in the descriptive statistics for the sample. One post-training survey question asked participants if they met any new people at the training workshop. Of the 120 respondents to this question, 47 (39%) replied that they met fewer than five new people, implying that almost half of the participants in the sample knew the majority of the other people at the trainings. This suggests a high level of political, social, and civic connectivity for a sizable share of the sample.

At the same time, the relatively low share of opposition candidates (FDC primary winners make up 16% of the sample, or 25 out of 157 respondents) and Independents in the dataset (11 %, or 17 out of 157) suggests that the sample over-represents NRM party primary winners compared to Independent and FDC challengers. Given that the recruitment method relied on communication between CEWIGO and senior party officials and women's league leaders, it is entirely possible that political elites acted as gatekeepers in informing women

candidates about the training. This could suggest that the women included in the sample may be more likely to hold preferences aligned with their co-partisans and party elites than women candidates who were not recruited by CEWIGO and therefore not sampled for the survey. This suggests that the results of this investigation should be interpreted keeping in mind that the survey sample likely over-represents women with ties to existing political elites. Yet, even so, this would bias against observing differences in priorities in competitive compared to stronghold constituencies. To the extent that differences emerge among women candidates depending on the level of competition faced, this would be indicative of a strong effect of political competition on the electoral strategies of women candidates regardless of their connections to existing political elites.

On the whole, these concerns with the sample underscore the exploratory nature of this study. Any insights gleaned from the data should be taken as suggestive, especially since there is a possibility that the women in the sample are more likely to be politically connected (particularly to party leaders) than the women in the broader population of candidates for reserved seats in local government at large.<sup>7</sup>

## 4.5 DATA AND MEASUREMENT

### 4.5.1 Main independent variable: electoral competition

To capture the competitiveness of the electoral environment faced by each woman surveyed, I draw on election results from 2011, the general election immediately prior to the one where respondents were surveyed for this study. Since my sample is unbalanced with respect to the number of women competing for various levels of office (LC3, LC4, and LC5), I create a measure of electoral competition that can be applied across women competing at different levels of local office. Importantly, Uganda's electoral system is structured in

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<sup>7</sup>Ideally, I would compare the women in the sample to women in the population on a range of factors to establish whether there are systematic differences between them. Unfortunately, it is extremely rare to have access to data on women candidates for office at the local level in Uganda that would allow for matching with the women in this dataset for comparison.

such a way that voters elect LC3 (subcounty), LC4 (municipal division), and LC5 (district) women representatives within counties (also known as constituencies). Counties consist of multiple subcounties or, in the case of municipalities, divisions. Because I want a measure of electoral competition that can be used for all three levels of reserved seats, the lowest possible level within the district at which to create this measure is the county level. Thus, I construct a measure of electoral competition at the county level and then assign this measure to all women candidates soliciting votes within that county (whether for LC3, LC4, or LC5 positions). In other words, the unit of analysis is individual women candidates within constituencies that range in their degree of competitiveness.

To create this county-level measure of electoral competition, I adapt the approach used by [Grossman and Michelitch \(2018\)](#) that focuses on the margin of victory enjoyed by the incumbent in the previous election cycle, in this case: the 2011 general elections.<sup>8</sup> Following [Grossman and Michelitch \(2018\)](#) and [Cleary \(2007\)](#), I calculate the margin of victory by taking the vote share of the winner in a given contest minus the vote share of that person's main challenger, while assigning any candidates who win unopposed a value of 100 for their margin of victory. I perform this calculation for all reserved women's LC3 contests in 2011 in the 27 constituencies covered by my survey data.<sup>9</sup> Then, I calculate the average margin of victory across all women's reserved LC3 contests in a given constituency and assign this value to all women candidates in my dataset running for office within that constituency/county.<sup>10</sup> This average margin of victory is a continuous measure of electoral competition and the

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<sup>8</sup>[Grossman and Michelitch \(2018\)](#) use pre-treatment election results from 2011 to calculate politicians' uncertainty over reelection in 2016 where the politicians in their sample are randomly selected from a pool of incumbents and they can match politicians directly to their constituencies. This is not possible with the survey data used here so I adapt their approach and use the average margin of victory for all LC3 races at the county level.

<sup>9</sup>Between 2011 and 2016, several new electoral areas were created by the Ugandan government. These new constituencies are linked to 15 of the observations in the survey data, where women candidates competed for seats in 2016 that did not exist in the 2011 general elections. This includes 8 observations from Kamwenge (Kibale East County), 4 from Kyenjojo (Mwenge Central County), and 3 from Mbarara (Kashari South County). I based the average margin of victory measure for these 15 observations on the LC3 election returns for the subcounty electoral areas in 2011 that were later reassigned to the newly created constituency for 2016.

<sup>10</sup>My measure of electoral competition differs from [Grossman and Michelitch \(2018\)](#) as they do not aggregate across electoral areas. The aggregation means that all candidates competing within a constituency are coded as facing the same level of electoral competition.

focus of the main analysis.<sup>11</sup> For a detailed description of Uganda’s administrative system and how I constructed the measure of electoral competition, see Appendix K.

Figure 3 shows the distribution of competition across constituencies represented in the survey sample. The data clearly indicates that the majority of women candidates in the sample come from constituencies that are less competitive, as represented by the fact that observations of the key independent variable are concentrated towards the right side of the graph, at the highest levels of the average margin of victory. This means that most women surveyed at the trainings were contesting for seats in party strongholds. This is consistent with my expectation that the sample could over-represent women with ties to existing party elites given the method of recruitment.<sup>12</sup>

Yet, the lack of observations in more competitive areas is not inherently problematic for observing relevant differences in candidates’ priorities. While it may appear that very few survey respondents competed in competitive electoral settings, the strong skew to the right in the data is driven by the fact that I had to assign competitiveness at the constituency level using data that aggregated across multiple electoral areas within the constituency. While I adopted this approach given limitations discussed in Appendix K, it means that I averaged the margin of victory across electoral areas within a single constituency to create the constituency-level measure of competition. For instance, it could be possible to have 8 out of 10 subcounties within a constituency where women candidates won unopposed in 2011 (yielding a margin of victory of 100%), while just two subcounties contained competitive elections where the margin of victory was much closer (e.g. 30% in each). Thus, the average margin of victory for that constituency overall would be 86 percentage points. This obscures the fact that elections were competitive in two of those 10 electoral areas even if in the aggregate it looks to be a clear party stronghold. In other words, the seemingly high

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<sup>11</sup>This is useful because it allows for some within-district variation in electoral competition rather than measuring electoral competition at the level of the district, since all districts in Uganda consist of at least two constituencies. However, I do not include district fixed effects in the main estimation because not all districts in my sample contain sufficient variation in the competitiveness of their constituencies. Still, I produce these results in the interest of robustness and include them in Appendix P.

<sup>12</sup>One possibility that has not been substantiated is that party leaders could have framed sending women candidates to the training as a reward granted to favored party loyalists given that the trainings provided two days worth of leadership and guidance in addition to covering food, lodging, and transportation fees for attendees.

concentration of women competing in areas where incumbents won by 70 to 80 percent of the vote share could actually be indicative of more competitive subcounty elections than is evident given the aggregation of the data at the constituency level.

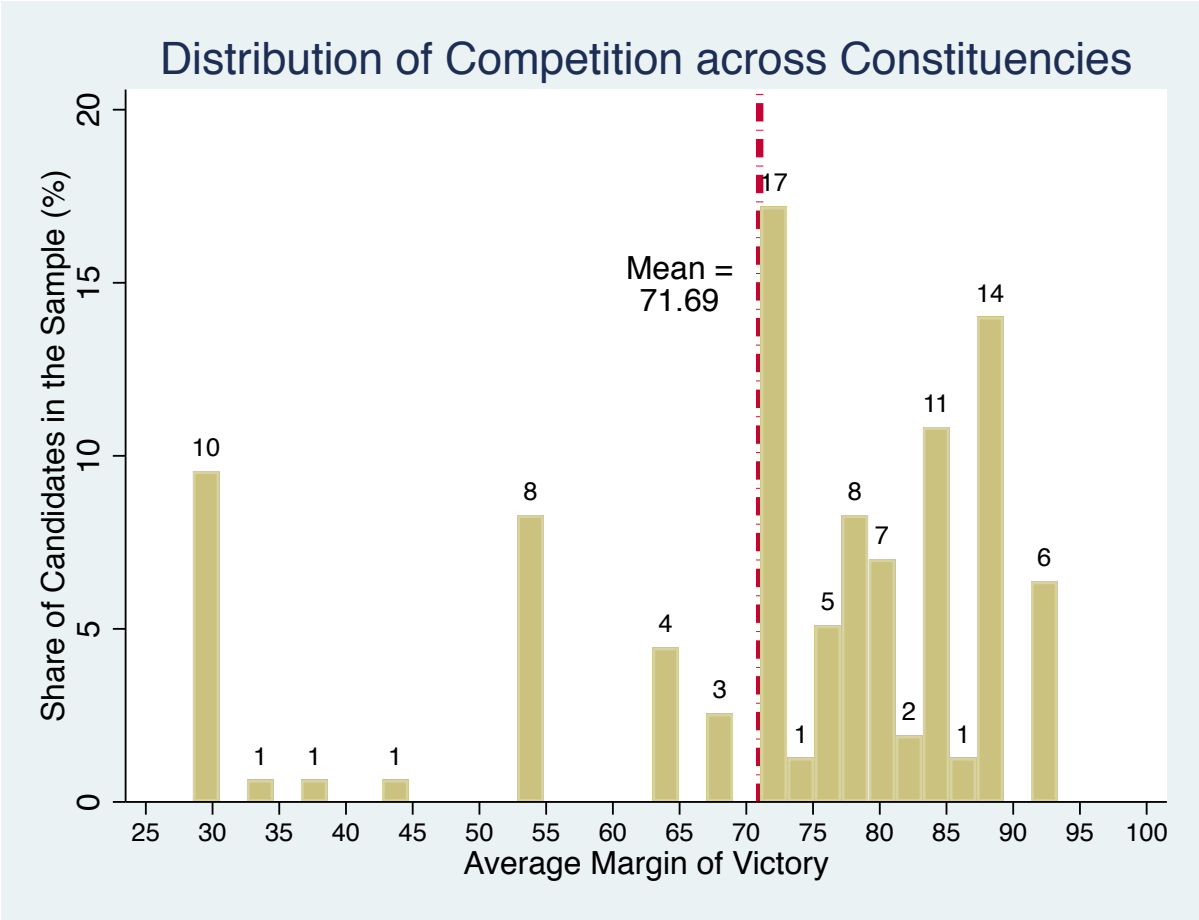


Figure 3: The level of competition across constituencies represented in the sample of women candidates surveyed.

At the same time, this also suggests that the more competitive constituencies in the sample are highly competitive areas since the average is not as highly skewed by a high concentration of women winning without facing any opposition at all. The importance of this insight into the data comes from acknowledging that the NRM’s dominance of local elections is often so strong in party strongholds that anyone winning the party’s nomination

during the primary phase of the electoral cycle is virtually guaranteed to win in the general election (Izama, 2015). To the extent that primary winners at the local level in stronghold areas are less likely to face any opposition at all in the general election, this creates a situation where there is a much higher concentration of unopposed winners in stronghold areas that could be weighting the distribution up towards higher average margins of victory.

#### 4.5.2 Main dependent variable: constituent groups prioritized by women candidates

To measure the impact of electoral competition on women candidates' priorities, I take advantage of a survey question concerning the constituent groups respondents planned to prioritize if elected: "*Q23: Which groups of people in your community do you **plan to focus on most** when it comes to **delivering goods and services** to address their needs? Please rank the **TOP 3** groups whose needs you plan to prioritize.*" Participants then separately marked which groups from the following list they would rank as "**FIRST**," "**SECOND**," and "**THIRD**" most important:

- A. My political party agents.
- B. Myself, my family, and my close friends.
- C. Women in the community that will elect me.
- D. Youth and children in the community.
- E. All people in the community that will elect me.
- F. The people in my community who share the same ethnic group as me.
- G. The people in my community who practice the same religion as me.
- H. The people in my community who share the same clan/tribal group as me.
- I. Disabled or otherwise physically vulnerable people in the community.

I use this data to generate a series of binary dependent variables that take the value of '1' if the respondent ranked a given constituent group in her 'Top 3' groups to prioritize and '0' if

otherwise.<sup>13</sup> Taken together, these measures are useful for evaluating whether there are clear differences between women candidates in terms of clientelistic, marginalized, or universalist patterns of constituency representation depending on the level of competition in the electoral environment.

Most importantly, there are clear differences in how the answer options are framed, with some constituent groups clearly identified as in-groups for the candidate in question (e.g. same religion, same clan, same ethnicity), while others are more broadly defined (e.g. women or youth in the community). This gives respondents the opportunity to more narrowly or more broadly define their intentions with respect to whose interests they intend to prioritize if elected to office. Participants could choose to prioritize ‘women in the community’ broadly speaking, or they could choose to prioritize those ‘who share the same ethnic group as me’ which does not necessarily exclude women, since they may have a preference for prioritizing the needs and interests of coethnic women in their community. It is also possible for the same respondent to prioritize both in their top three.

Figure 4 shows the distribution of responses to this question across all candidates surveyed depending on the level of competition faced. For ease of presentation, I summarize responses within four ranges of electoral competition, ranging from most competitive (average margin of victory between 20 and 40 percent) to least competitive (average margin of victory of 80 percentage points or more). This initial look at the data suggests there is a lot of variation in the share of candidates who prioritize each group depending on whether they are competing in a more or less competitive environment.

Most notably, this descriptive data suggests that more women in party strongholds favor clientelistic patterns of constituent group priorities compared to women in highly competitive settings. For example, 43% of candidates in the least competitive party stronghold constituencies name ‘political party agents’ in their top three compared to just 24% of women in the most competitive constituencies. The share of candidates in strongholds who prioritize other groups traditionally linked to the distribution of goods and services through

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<sup>13</sup>Due to some misunderstanding in completing the self-administered questionnaire, it is not possible to distinguish between first most important, second most important, and third most important. The data can only be analyzed by considering whether a given group was in the candidate’s top three.

clientelistic networks is also noticeably higher than what is observed in most competitive areas, including more support for prioritizing ‘myself, family, and friends’ as well as members of the same religion and the same clan. Somewhat surprisingly in light of much of the existing literature, more women in stronghold areas prioritize the interests of historically marginalized groups such as the disabled or physically vulnerable, while fairly high rates of prioritizing women and youth or children are noted across electoral settings. In contrast, the results for prioritizing ‘all people’ in the community suggest that adopting a universalist approach is much less popular in the deepest of party strongholds than in more competitive areas.

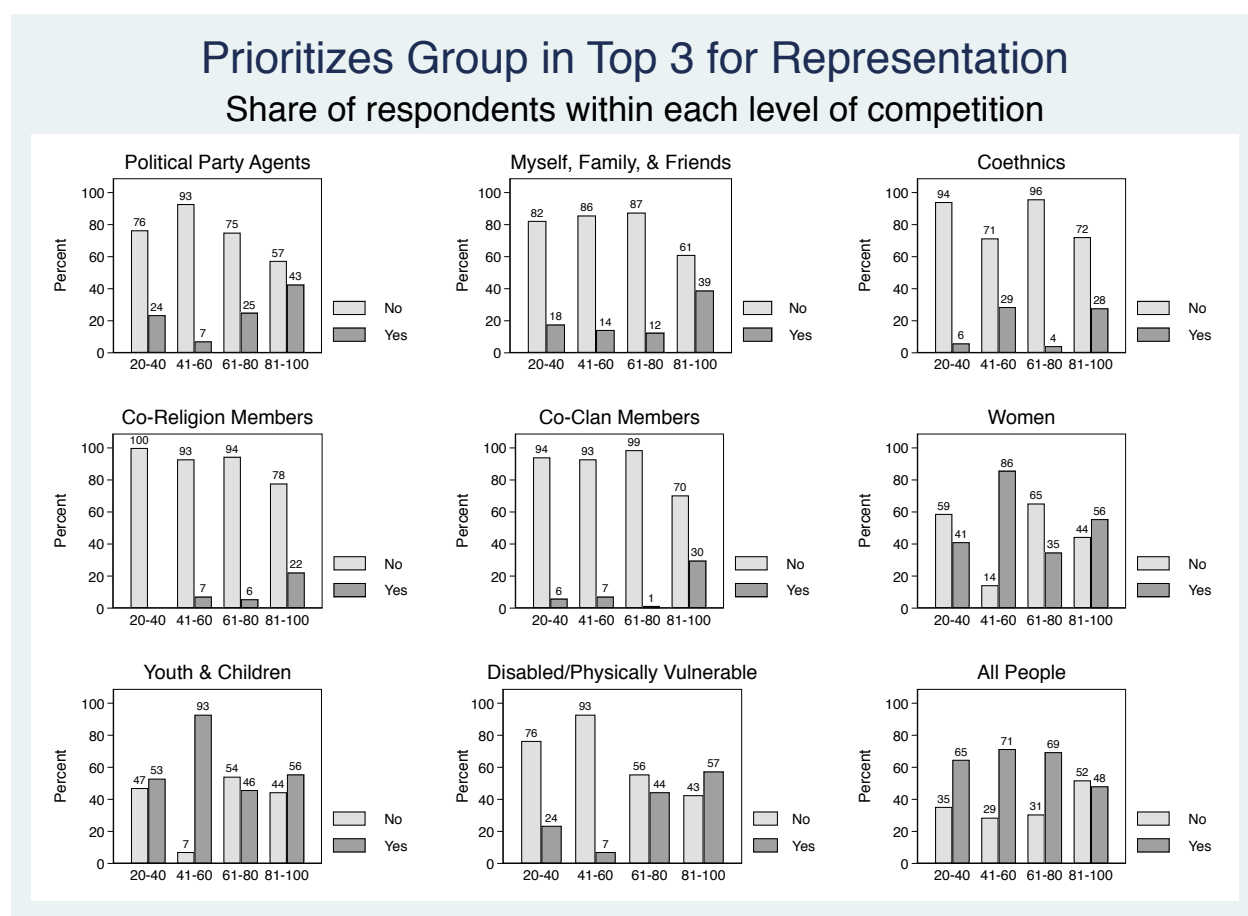


Figure 4: Share of respondents within each level of competition who name a given constituent group within their top three priorities.



As alluded to above, some of these answer options arguably capture preferences for prioritizing the representation of similar types of groups, such as those linked to status quo distributions of political power through client-patron networks or those representing the redistribution of resources to historically marginalized groups. Thus, in addition to estimating the effect of electoral competition on each type of constituent group, I assume that representation priorities may be correlated and test for the possibility that different outcome measures are related to the same underlying latent variable. To gauge the inter-relatedness of these categories, I perform principal-component analysis (PCA) of the nine original variables.<sup>14</sup> The results indicate that variation in representation priorities largely loads onto three main component indices which can explain most of the variation in the data. The first two of these component loadings strongly align with conceptually distinct underlying latent variables represented by the choice of different groups to prioritize for representation, while the third component loading seems to be primarily driven by the measure prioritizing ‘all people in the community.’<sup>15</sup> For this reason, I focus on the first two components and predict the score on each of these for each individual. These two new measures and the variables that load together on them are as follows:

- (1) **Clientelistic Groups Index:** High positive correlation with prioritizing (A) My political party agents, (B) Myself, my family, and my close friends, (F) Coethnics, (G) Members of the same religion, and (H) Members of the same clan/tribal group.
- (2) **Marginalized Groups Index:** High positive correlation with prioritizing (C) Women, (D) Youth and children, and (I) Disabled and/or Physically Vulnerable.

I refer to the first component index as ‘clientelistic’ because it captures an underlying preference for prioritizing the needs of social groups known to be conduits for political patronage. While it is true that some of these groups may genuinely be among those with the greatest need in the candidate’s community, prioritizing these groups could also be indicative of quotas for women representatives being used to solidify or reinforce existing

<sup>14</sup>Details on the procedure and results of the principal component analysis are available in Appendix L.

<sup>15</sup>I also produced the three indices using inverse covariance weighting (Anderson, 2008) to check the robustness of the results. A discussion of the differences in these two approaches, along with a comparison of the results, is included in Appendix P.2.

bases of political elite power rather than serving to enhance the inclusion of historically excluded groups in political decision-making. I contrast this with results for the ‘marginalized groups’ index because this index captures an underlying tendency to prioritize the interests of groups that are historically marginalized or excluded from benefiting through direct access to patronage networks that disproportionately benefit men.

Figure 5 gives a preliminary look at how these two indices are represented in the survey sample within each level of electoral competition. For ease of visual presentation, I divided the sample into ‘below median’ and ‘above median’ groups based on the scores for each index and then calculated the share of respondents within each of four bins of electoral competition who scored above the median or below the median for the sample on each of the two indices. I do not use the median-cut binary measures of the indices in the main analysis, but they make it easier to get a sense of the data before proceeding to the statistical estimation of the relationship.

In general, Figure 5 confirms the patterns noted when considering each of the constituent group outcomes separately: women in party strongholds are more closely associated with above median levels of clientelistic group representation than women in more competitive electoral areas. Meanwhile, there is somewhat less variation in the prioritization of marginalized groups across constituencies by level of competition. However, the high percentage of above median levels of support for marginalized groups in areas where the average margin of victory is 41-60 percentage points could suggest that marginalized groups are more likely to be prioritized in more competitive areas than less competitive ones. On the whole, this initial look at the patterns across constituencies by level of competition suggests that there are significant differences among women candidates for local office in terms of the constituent groups they intend to prioritize if elected to office.

## Index Score Distribution within Each Level of Competition

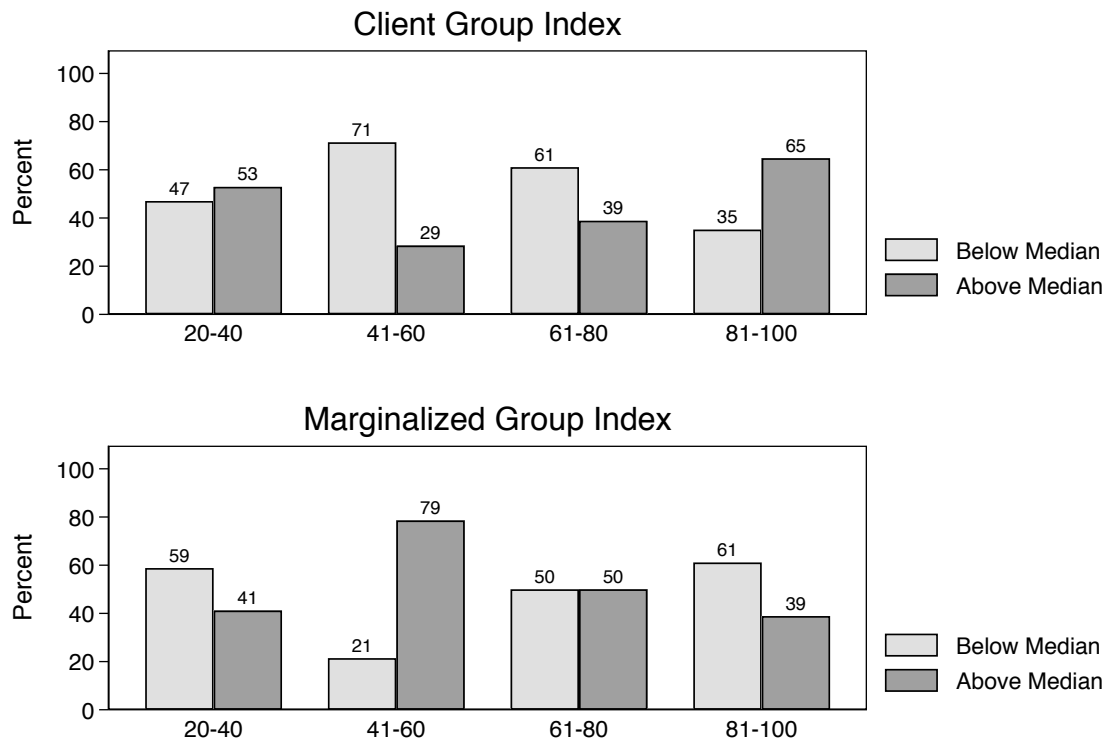


Figure 5: Distribution of indices within each bin of electoral competition.

### 4.5.3 Control variables

To isolate the independent effect of the electoral environment on representation priorities, I take advantage of additional information about the individual candidates provided by the survey questionnaire. I briefly review the measures included as controls here, but the summary statistics for all variables used in the analysis are available in Appendix [M](#).

In terms of political factors, I include NRM party affiliation as a binary variable that takes the value of '1' if the candidate ran under the flag of the NRM and '0' otherwise. The vast majority of the candidates in the sample are NRM-affiliated (115, or 73%), while 25 (16%) represent the Forum for Democratic Change (the FDC is the leading opposition

party) and 17 are Independents. The majority of party strongholds in Uganda are dominated by the NRM, but there are some areas in the study districts where the FDC maintains a considerable presence, such as in Kasese District. Since Ugandan political parties differ very little in the substance of their party platforms, I control for party affiliation to capture the independent effect of competition rather than to account for any substantive differences in constituent priorities linked to party platform differences. I also include a binary variable that accounts for whether the candidate's spouse has served in elected or appointed government or party leadership ('spousal networks'). Some evidence suggests women candidates may be selected by political elites to compete for quota seats as placeholders whose interests are more closely aligned with male party elites than with the interests of their women constituents or the population more broadly ([Ahikire, 2009](#)). This could be most likely for women with immediate familial connections.

To account for demographic and economic status variation between individuals, I also control for age (continuous), marital status (1 = married), religious and ethnic affiliation, and level of education. Age could impact candidates' constituent group priorities since age may be correlated with the extent to which candidates themselves benefit from policy-making that prioritizes different groups. For instance, younger candidates may be more interested in prioritizing policy-making that benefits youth, such as job creation. Meanwhile, older candidates could be more interested in programs aimed at improving adult literacy or elderly care initiatives. In terms of marital status, interviews conducted by the author in Uganda suggest that many Ugandan voters perceive a candidate's marital status as an important indicator of their ability to lead. Interviewed subjects reported that being married is a signal that a woman can manage a household, and thus an indication that she can manage her responsibilities as a woman representative. At the same time, marital status could impact candidates' policy preferences and constituent group priorities. For instance, married women may be more likely to prioritize youth and children as they may also be more likely to have children of their own. I also include binary indicators for membership in one of the two most common religious groups in the Western Region (Anglican/Protestant and Catholic) and membership in one of the two most common ethnic groups in a given study district (varies by district, but includes Munyakole, Mukiga, Mukhonzo, and Mutoro). In both cases, if the

candidate is a member, they receive a value of ‘1’ while all others receive a value of ‘0’. I include membership in these groups because political parties may not be the only source of influence over candidates in local elections. The extent to which respondents prioritize other clientelistic interest groups besides political party elites could partly be due to their membership in socially salient groups.

A candidate’s level of education could also influence their representation priorities. I include an ‘education index’ composed of survey questions regarding the respondent’s highest level of education completed, level of literacy, and degree of English fluency. All three measures are combined into an index using inverse covariance weighting ([Anderson, 2008](#)). I include English fluency and literacy in particular since these factors should affect the ability of the respondent to fully comprehend and answer the questions in the survey, not to mention her ability to effectively participate in the legislature (if elected).<sup>16</sup> To account for variation in the socio-economic background of candidates, I include two ordered categorical measures of household income. One measure asks candidates to rank their household economic well-being relative to the other households in their constituency, while the second measure asks candidates to reflect on their subjective level of income and whether it covers their needs or not. These two measures are not highly correlated, and thus are included separately as controls.

Finally, I also include a dummy variable for the level of office contested that takes the value of ‘1’ if the candidate is competing for LC5 woman representative (at the district level) and ‘0’ if she is competing for LC3 (subcounty) or LC4 (municipality) representative. LC5 candidates must appeal to a larger electoral constituency and campaigns for this position are much more costly and high profile than that of LC3 or LC4 representative. This could alter the incentives for women candidates to prioritize certain groups.

Before proceeding to the statistical analysis, I note that there is some interesting variation in the observable characteristics for women candidates in the sample depending on the level

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<sup>16</sup>English is one of the two official languages of Uganda and the primary language used in national political bodies. Literacy levels also matter given that budget proposals, council meeting notes, and policy proposals are frequently circulated before, after, and during meetings, requiring representatives to be able to read in order to effectively prepare for and participate in council sessions.

of competition. In Table 8, I present the means for two sets of variables used in the analysis – the main dependent variables and the main control variables – calculated within each of four bins of electoral competition. The variation in the controls is especially important to note, since the data confirms that party strongholds are largely dominated by NRM candidates and more women in less competitive constituencies report having spouses with ties to government or party leadership. For the most part, the candidates seem fairly similar to one another on a range of demographic factors, including across several measures of education and socio-economic status. This suggests that controlling for these characteristics is important, but that the variables expected to vary alongside the level of competition generally do so in line with my expectations.

Table 8: Variation in the means of variables used in the analysis across four bins of electoral competition.

	Mean <i>20-40</i>	Mean <i>41-60</i>	Mean <i>61-80</i>	Mean <i>81-100</i>
<b><u>Dependent Variables</u></b>				
Clientelistic groups index, PCA (continuous)	-0.53	0.03	-0.54	0.88
Top 3: Party agents	0.24	0.07	0.25	0.43
Top 3: Self, family, friends	0.18	0.14	0.12	0.39
Top 3: Same religion	0.00	0.07	0.06	0.22
Top 3: Coethnics	0.06	0.29	0.04	0.28
Top 3: Same clan	0.06	0.07	0.01	0.30
Marginalized groups index, PCA (continuous)	-0.16	0.71	-0.18	0.10
Top 3: Women	0.41	0.86	0.35	0.56
Top 3: Youth	0.53	0.93	0.46	0.56
Top 3: Disabled/physically vulnerable	0.24	0.07	0.44	0.57
Top 3: All people in the community	0.65	0.71	0.69	0.48
<b><u>Control Variables</u></b>				
NRM affiliated (%)	0.24	0.57	0.88	0.74
Spousal networks (%)	0.18	0.28	0.34	0.32
Age (continuous)	41.29	40.71	43.42	42.84
Married (%)	0.59	0.36	0.75	0.79
Member of dominant religion (%)	0.47	0.43	0.70	0.72
Member of dominant ethnic group (%)	0.65	0.71	0.80	0.85
Education index (continuous)	0.34	0.55	-0.36	0.23
Highest level of educ completed (0-7)	2.35	2.76	1.62	2.43
Literacy level (0-2)	1.87	1.93	1.51	1.75
English fluency (0-2)	1.53	1.57	1.26	1.46
Subjective HH monthly income (1-4)	2.06	2.73	2.11	2.22
Subjective relative HH econ. well-being (1-5)	3.18	3.90	3.61	3.52
HH dependents under age 13 (continuous)	2.59	2.76	2.88	2.52
LC3 Candidates (%)	0.53	0.43	0.83	0.56
LC4 Candidates (%)	0.24	0.36	0.00	0.00
LC5 Candidates (%)	0.24	0.21	0.17	0.44
<i>N</i>	17	14	72	54

*All means calculated with standard errors clustered at the constituency level.*

## 4.6 MAIN ANALYSIS

### 4.6.1 Estimation strategy

While the descriptive evidence suggests there is some variation in representation priorities given the competitiveness of the electoral environment, it is still necessary to evaluate whether this is driven primarily by competition (or lack thereof), or some other factor. For this reason, I estimate a series of regressions with each index of representation included (separately) as the dependent variable. Electoral competition enters these models as the main independent variable of interest, but I also include the covariates listed above as controls since they could theoretically impact the likelihood that a candidate would prefer prioritizing a particular group once in office. To estimate the effect of electoral competition on women candidates' representation priorities, I employ an ordinary least squares regression of the following form:

$$Y_{ij} = \alpha + \beta C_i + X_i' \gamma + \epsilon_{ij} \quad (4.1)$$

where  $Y_{ij}$  is the outcome (score on a given representation index measured as a continuous variable) for individual candidate  $i$  in county  $j$ .  $C_i$  is a continuous measure of the level of electoral competition in the county where the individual competed in 2016. The key coefficient of interest is  $\beta$ , which gives the effect of a percentage point increase in the average margin of victory (i.e. a decrease in the level of competition faced) on the level of support for prioritizing a given constituent group index.  $X_i' \gamma$  is a vector of control variables (identified in Section 4.5.3 above) included to improve efficiency and isolate the effect of the electoral environment on women candidates' representation priorities, while  $\epsilon_{ij}$  is the individual level error term clustered at the level of the constituency.<sup>17</sup> I implemented 10 rounds of predictive mean-matching imputation to address a small amount of item-level missingness in survey

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<sup>17</sup>I cluster standard errors at the constituency-level because this is the level at which I assign the measure of electoral competition to candidates in my dataset. In Appendix O and Appendix P, I check the sensitivity of the results to the use of robust standard errors as well.



covariates.<sup>18</sup> Where measures capture one latent trait of interest, I aggregate them into indices using inverse covariance weighting which creates an optimal weighted average by weighting-up index components that provide more ‘new’ information ([Anderson, 2008](#)).

In the main text I present only the results for the main model specification which includes all covariates as controls and clustered standard errors at the constituency level. I present the regression table of the output for the models that include the indices as continuous dependent variables in [Appendix O](#), but I present figures showing the average value of the dependent variable for different levels of competition (continuous measure) holding all other variables in the model at their means in [Section 4.6.2](#) below. In the specifications where I evaluate the probability of a candidate prioritizing a specific group in their top three rather than one of the indices, I use a probit specification to accommodate the binary dependent variable. I check the robustness of the main results to several alternative specifications, including no controls, original controls plus constituency fixed effects, original controls plus district fixed effects, additional controls developed from the survey data, and additional controls to account for district-level variation that could plausibly influence candidates’ constituent group priorities (see [Appendix P](#)). I also confirm the main results for the subsample of only those women who are fluent in English given that the surveys were self-administered and printed in English. In general, the main results for the effect of competition on candidates’ representation priorities holds across specifications, though I note some differences in the significance of the control variables depending on the specification (discussed at length in [Appendix P](#)).

#### **4.6.2 Regression results**

The effect of electoral competition on candidates’ representation priorities measured as continuous indices of clientelistic or marginalized group priorities is presented in [Figure 6](#). This is akin to running an ordinary least squares regression of each level of competition on the outcome and producing the adjusted average effect at each level holding all other variables at their means. In the first panel of [Figure 6](#), the results suggest that there is significant vari-

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<sup>18</sup>Details on the imputation are available in [Appendix N](#).

ation in the likelihood that women candidates will prioritize clientelistic constituent groups for representation in more competitive compared to less competitive electoral environments. The average index of clientelistic group priorities in the most competitive constituencies is negative and statistically significant at the 0.05 level, while the average level of clientelistic priorities increases as constituencies become less competitive. This translates into a negative effect of competition on clientelistic representation priorities overall.

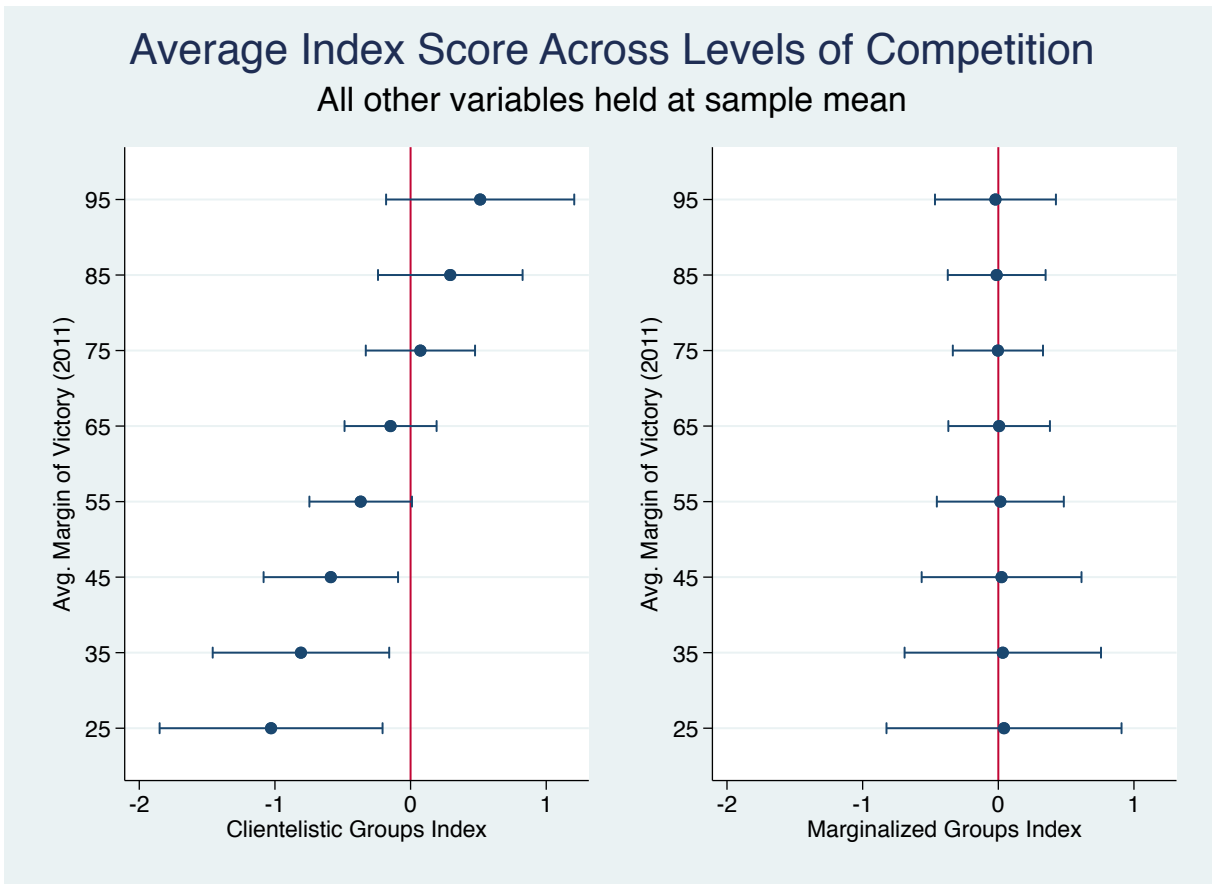


Figure 6: Constituent group priorities at different levels of competition, all controls held at means.

In contrast, the second panel of Figure 6 indicates that the level of competition has no statistically significant effect on women candidates' intent to prioritize the kinds of constituent groups that make up the index of marginalized groups. In fact, there is no indication

that electoral competition – whether at the lowest or at the highest levels – influences the prioritization of marginalized groups broadly defined. This lack of variation is clearly different from what occurs in the case of clientelistic representation, where there are differences in priorities in the most competitive compared to the least competitive constituencies in the sample.

The regression table of coefficients, standard errors, and p-values for all variables in the two equations depicted above are available in Appendix O. In the main model specification with controls and constituency clustered standard errors (Model 2), the output confirms that a percentage point increase in the average margin of victory (corresponding to a decrease in competitiveness) is associated with a statistically significant 0.02 unit increase in the likelihood of demonstrating clientelistic group priorities (p-value = 0.065). In Model 3 (only presented in the Appendix), I include constituency fixed-effects to account for some of the unobservable variation that could be affecting the results. This leads to an increase in the size of the effect, yielding a statically strong and large positive relationship between a decrease in competition and the level of clientelistic group representation (p-value=0.000, coefficient=0.09). As illustrated in the second Panel in Figure 6, the regression output confirms that there is no evidence of a statistically significant effect of competition on the marginalized group index. However, I acknowledge this result with some caution since the specification that includes constituency fixed effects does show a highly significant negative effect of an increase in the margin of victory (corresponding to a decrease in the level of competition faced) on prioritizing marginalized groups.

To understand how much these effects may be driven by the various components of each index, I also estimate the predicted probability that a candidate will select a given index component as one of their top three priorities at various levels of competition, holding all other variables at their means. Figure 7 shows the results for the trace elements that correlate with the clientelistic groups index, while Figure 8 presents the primary elements underlying the marginalized groups index. The results for each clientelistic group considered separately suggest that there are three constituent groups that women candidates are significantly more likely to prioritize in strongholds compared to in competitive election areas: the candidate's

personal network of family and friends, those who share the candidate's religion, and those who belong to the same tribe or clan. The direction of the effect, while not significantly different at conventional levels, also suggests that prioritizing political party agents and coethnics is more likely in party strongholds than in highly competitive electoral areas.

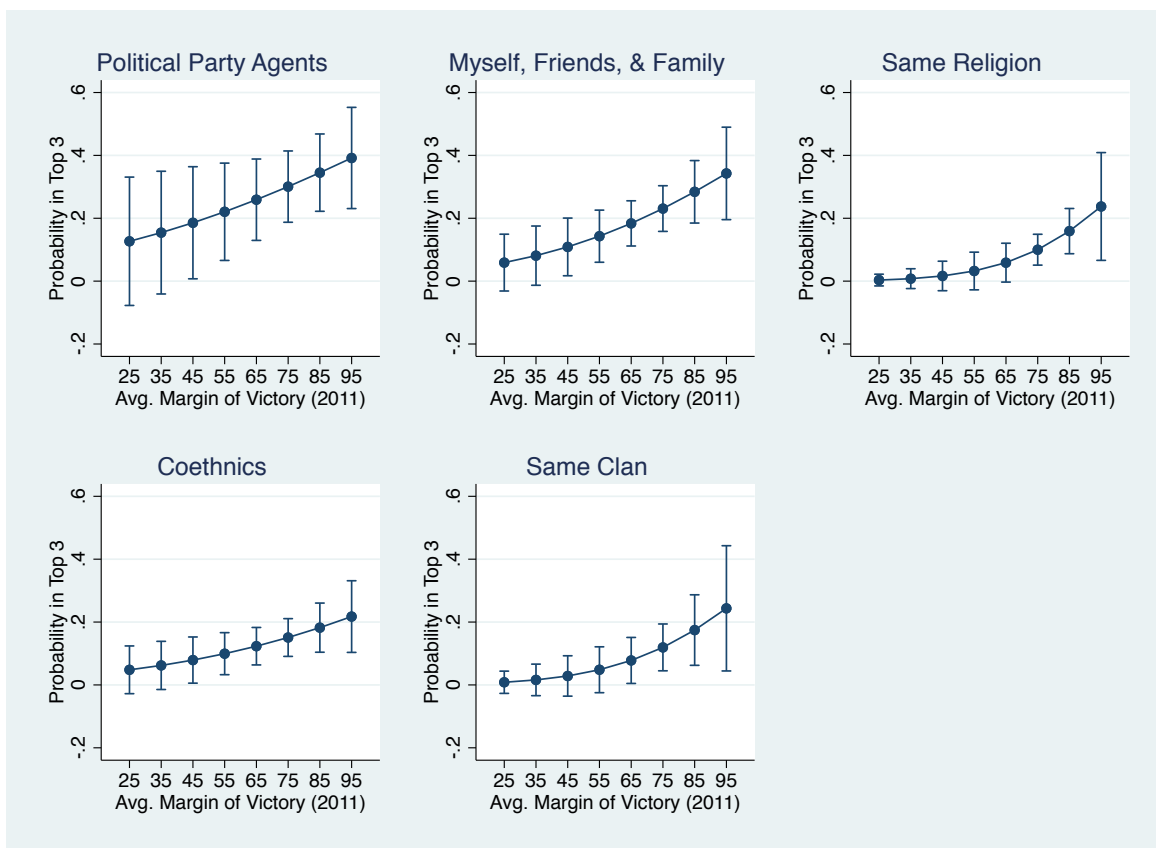


Figure 7: Average predicted probability of prioritizing clientelistic constituent groups, all controls at their means and standard errors clustered at the constituency level.

Meanwhile, the group-specific outcomes presented in Figure 8 suggest a slightly different story than the results for the index of marginalized groups overall. Here, it is clear that the probability of prioritizing women is consistent across electoral settings, but there is some evidence that the likelihood of prioritizing the disabled or physically vulnerable increases in party strongholds compared to more competitive electoral settings. While there is a slight

negative effect of stronghold status on the probability of prioritizes the interests of youth or children, the slope of the line linking the averages (holding all control variables at their means) is fairly flat. This suggests that the probability of a woman candidate prioritizing women or youth is fairly consistent regardless of the level of electoral competition. This could indicate that electoral competition does little to affect whether women or youth will receive attention from women politicians. Although, there is some evidence that other marginalized groups may be more likely to benefit in strongholds than in competitive areas, such as the disabled or physically vulnerable. At the same time, it is clear that clientelistic groups receive much more attention from women candidates in strongholds than in competitive areas.

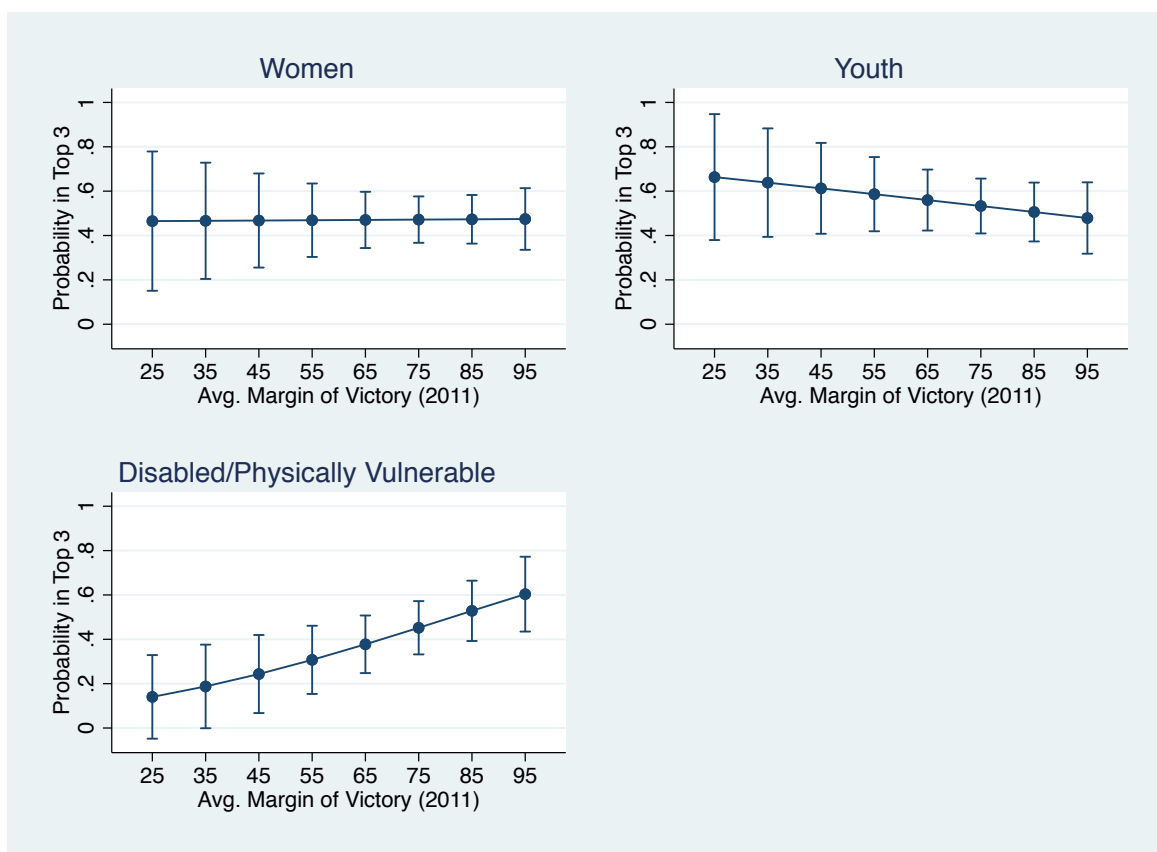


Figure 8: Average predicted probability of prioritizing marginalized constituent groups, all controls at their means and standard errors clustered at the constituency level.

Yet, none of the evidence presented thus far indicates a clear trend in priorities in competitive constituencies. In the theory section, I anticipated that a lack of clientelistic preferences in competitive areas could signal a more universalist approach to representing all members of the constituency, broadly speaking. To this end, I also consider whether the tendency to adopt a more universalist outlook varies by competitiveness. I present the results for the probability of prioritizing ‘all people in the community’ across different levels of competition in Figure 9. The results suggest a dramatic decrease in representation for all in the absence of political competition. This drop corresponds with the increased likelihood of prioritizing narrowly defined in-groups, but also coincides with a steady probability of supporting women’s interests, broadly defined.

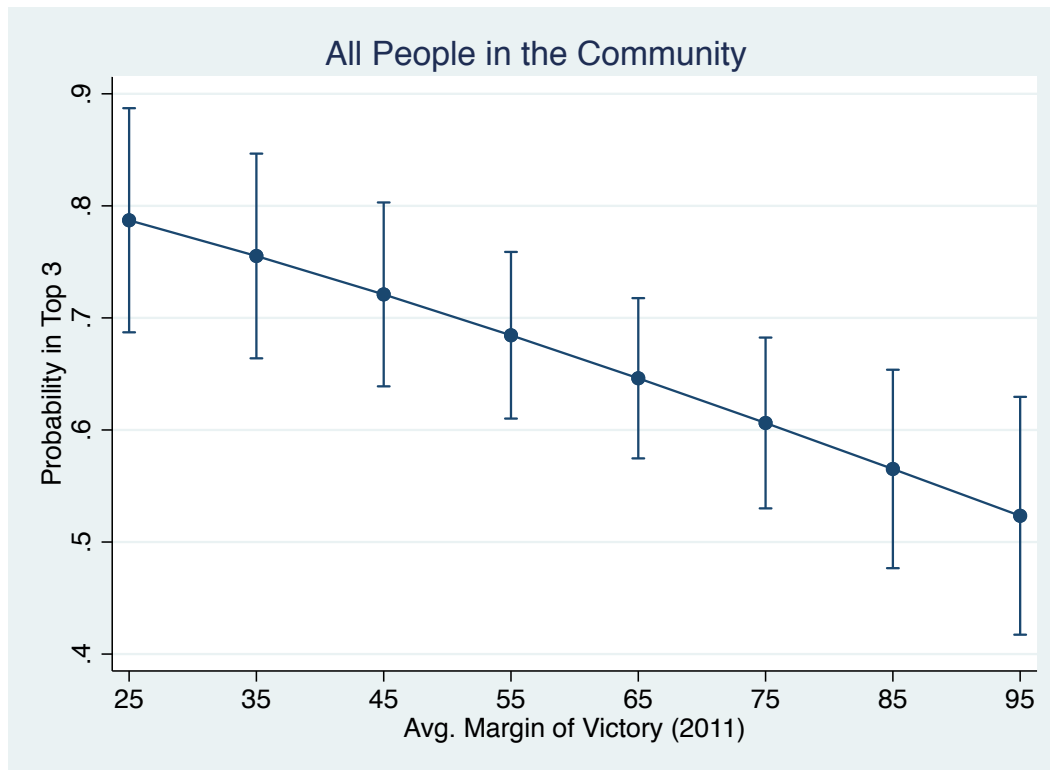


Figure 9: Average predicted probability of prioritizing all people in the constituency, all controls at their means and standard errors clustered at the constituency level.

Lastly, while I do control for NRM party affiliation in the models that produced the results shown above, I took an additional step with my analysis to evaluate the conditional marginal effect of NRM affiliation (relative to non-NRM affiliation) across all levels of competition on both the clientelistic groups index and the marginalized groups index. While I do not report the results here, I confirm that there is no clear evidence that NRM-affiliation has an additional influence on candidates' priorities that is statistically different from the effect of competition for non-NRM candidates.

## **4.7 GENERAL DISCUSSION**

### **4.7.1 Summary and interpretation of main findings**

Overall, my analysis of the survey data indicates support for the expectation that women candidates in party strongholds will be more likely to prioritize the interests of constituents with ties to clientelistic networks than women candidates in more competitive constituencies. By contrast, women candidates in highly competitive areas are significantly more likely than women in party strongholds to adopt a more universalist approach to representing all members of their community as a whole. This could reflect strategic incentives women candidates in competitive areas face to appeal to a wider range of constituent groups with the power to influence the outcome of the electoral process, whereas in party strongholds there are stronger incentives for women candidates to reinforce existing norms of clientelistic politics rather than issue-based politics. At the same time, however, I find some evidence that women candidates in party strongholds are more likely than those in competitive constituencies to prioritize the interests of disabled or physically vulnerable groups. This could suggest that party strongholds afford women candidates the opportunity to selectively redirect resources toward historically marginalized groups. Additional research is needed to unpack whether this is something that distinguishes women candidates for quota seats from their male colleagues and from women holding unreserved seats. Otherwise, it is difficult to interpret this as evidence of any improvement in access to clientelistic networks of resource distribution

for marginalized groups in party strongholds following the adoption of gender-based quotas.

Importantly, my results hold while controlling for individual-level factors that could vary across candidates, such as level of education, socio-economic well-being, religious, and ethnic affiliation. This suggests that regardless of individual candidate factors, the competitiveness of the electoral setting can exert an independent effect on the electoral strategies adopted by women candidates for office. These strategies – in the form of which constituent groups candidates tend to prioritize if elected to office – may reflect a more nuanced understanding of the groups whose support candidates believe they need to win office in competitive compared to non-competitive settings. Where victory is virtually assured once the primary elections are over (non-competitive, stronghold areas), women representatives may be more likely to use their reserved seat to channel benefits toward groups linked to status quo norms of clientelistic politics.

One way to interpret this is as evidence that quotas implemented in the context of electoral competition are more likely to lead to equitable representation for all community members, whereas quotas without competition may only reinforce the power of existing client-patron networks in politics. Given that these networks largely exclude women from meaningful decision-making processes ([Beall, 2005](#)), this could contribute to the perpetuation of gender inequality even when quotas are effective at getting more women in office. The extent to which these clientelistic patterns of behavior in party strongholds affect the potential for broader swaths of the electorate to benefit from having more women in office likely depends on the extent to which women candidates plan to focus mostly on directing the flow of resources to select patrons rather than considering the broader interests of the constituency as a whole. To the extent that women candidates face a trade-off in choosing client group members over collective policy gains for broader swaths of the electorate, then quotas may serve to reinforce existing inequalities in political decision-making rather than enhancing the inclusion of all individuals belonging to historically excluded groups. This is important, since this is exactly the kind of inequality in political participation that quotas for group-based descriptive representation are intended to help correct.



#### 4.7.2 Additional considerations and study limitations

These results also merit discussion in light of the limitations of the survey sample. As noted previously, the sample of women who responded to the survey was a non-random sample of women, composed entirely of women seeking to serve in reserved seats. It is worth considering whether these results should be expected to vary if the sample included women running for office in open elections against men as well as for reserved seats. While qualitative data I collected from interviews and focus groups with women candidates, elected representatives, and non-profit professionals suggest that it is still exceedingly rare for women to contest for open seats against men, this is an area that many non-governmental organizations (like CEWIGO) hope to improve on in the future.

If the logic forwarded here is correct, then it is not obvious that we should expect women's behavior to change much in open/unreserved seat contests relative to reserved contests. It is highly unlikely that a woman candidate would be elected without facing competition since she is almost certain to be opposed by at least one male candidate given evidence that male co-partisans are typically the most threatened by the adoption of quotas for women in government ([Zetterberg, 2008](#)). There are at least two possibilities given this scenario. On the one hand, competition for the party nomination could lead women candidates for open seats to show even more deference to party leaders, thus increasing their likelihood of prioritizing clientelistic representation strategies. On the other hand, party leaders themselves want to see candidates nominated who have the best chance who have the best chance of winning. Given that existing evidence shows that public attitudes toward women in leadership positions do not always improve following quotas when quotas give the impression that women candidates could not compete against men on the basis of merit and qualifications alone ([Franceschet and Piscopo, 2008](#)), it is not clear that a political party would back a woman candidate over a suitable male candidate for the nomination in a highly competitive context. This puts women seeking open seats in the position of contesting as Independents (in the event that they do not secure the party nomination), which is much more difficult to manage from a financial perspective. This suggests that, somewhat unexpectedly, the most favorable place for a woman to contest an open seat would

be in party strongholds where the outcome of the electoral process can be more effectively controlled by the dominant political party. Provided she can secure the party nomination in the primary, this could put additional pressure on women in open seats in strongholds to appeal to the interests of powerful party elites. Once again, this illustrates how even with quotas designed to enhance women's participation in office, women are more constrained than their male colleagues by structural inequalities that make it difficult for them to act with the same degree of freedom as their male colleagues.

This discussion is also pertinent to the issue of potential endogeneity in that the level of competition could have an influence on the types of women who run in a given area. The concern is whether competition affects the supply of candidates (who are more or less clientelistic), or whether competition influences women candidates to prioritize different things. In short, the answer is likely to be both. Based on the preceding discussion, another factor to consider is the influence of party leaders over the outcome of the nomination process. In less competitive areas, women candidates know they are unlikely to win without party support, so women who do not support the party or lack strong connections to party elites may be less likely to run in general. This could result in women who are more prone to client representation priorities to dominate the slate of candidates in party strongholds. By contrast, there is less certainty over who will win in competitive areas, which may attract women candidates who vary more in their representation priorities, and not all of whom prioritize the interests of political party elites or other select in-groups. Thus, the supply of candidate types could differ across constituencies as a byproduct of the level of electoral competition. Even so, this does not detract from the overall finding in this essay that institutional conditions impact the ability of women to organize and participate in political decision-making without regard for the interests and preferences of a predominantly male political elite. If party strongholds are more likely to attract party loyalists than those seeking to prioritize the interests of all constituents, this still constitutes a potential barrier to mobilizing and acting on behalf of women's policy interests to the extent that they deviate from those of elite interests.

As a final consideration, the results should be interpreted as preliminary evidence rather

than conclusive given the same sample size as well as the potential for unobserved factors to be driving the results. While I try to control for this possibility in the robustness checks included in Appendix P, it is important to acknowledge that future iterations of this research could include other variables in the analysis that could influence the results but which were not possible to obtain in this study. For instance, at the individual-level ideally I would want to control for whether the candidate was the incumbent and whether they had previously received training on electoral strategy since either of these could influence their priorities. As well, I would ideally create a measure of electoral competition that would not require aggregating across subcounties and losing so much of the variation in the sample. This issue in particular could be addressed if I were to expand the coverage of women candidates surveyed to a representative sample of a random selection of constituencies across Ugandan districts and ensure even coverage across the level of office contested. Moreover, while I attempt to evaluate the sensitivity of the results to district-level variation in observable factors such as gender inequality, poverty, and development (access to clean water and electricity) in the Appendix, it would be an improvement to be able to account for these factors at the constituency level. Future iterations of this research should bear these limitations in mind.

## 4.8 CONCLUSION

On the whole, I find that there is variation among women candidates in terms of the electoral strategies they emphasize. Depending on the competitiveness of the electoral environment and the degree to which existing political elites control the candidate selection process, women may be more likely to prioritize constituent groups consistent with those favored by the dominant party in the area. This implies that women candidates may not always be motivated to prioritize the interests of women constituents generally speaking; in the absence of electoral competition that creates opportunities to appeal to voters who may not be at the top of the ruling party's agenda, they may be more inclined to adhere to existing political norms of clientelism along status quo group lines.

This is an important finding because it shows that women politicians may not always be motivated to act on behalf of their women constituents, broadly speaking. This matters because it suggests that substantive representation of women may not follow from the descriptive representation of women in settings where the institutional reality of financing and running an election campaign requires considerable support from the ruling elite. Given the systematic inequalities in access to the resources needed to participate equally in political life, women candidates may find it difficult to step outside of the boundaries of political priorities set up a predominantly male political elite. This interpretation of the evidence is consistent with feminist critiques of democratic systems that fail to provide the tools and entitlements necessary for women to participate as equal citizens ([Pateman, 1988, 2011](#); [Task Force on Democracy, Economic Security, and Social Justice in a Volatile World, 2011](#)).

As such, this essay also implies that an alternative mechanism through which policymakers can positively influence the quality of representation for women as a population group would be to focus on improving the conditions under which quota women run for office. Specifically, these results underscore the importance of a competitive electoral process for democratic accountability. In this sense, these findings are consistent with other recent evidence from Uganda that incumbent representatives (broadly defined to include both men and women) are more likely to advocate on behalf of their constituents when they face a more competitive electoral environment ([Grossman and Michelitch, 2018](#)). With respect to women politicians, I find preliminary evidence that the incentives to substantively represent constituent groups hold not only for incumbents, but also for the broader pool of candidates available to voters at the ballot box. On the whole, this research underscores the need to build more effective political institutions alongside the introduction of quotas if the goal is ultimately to improve equity in outcomes for all rather than a subset of those individuals with access to clientelistic networks of political support. My findings caution against assuming that women politicians for office will necessarily be motivated to actively pursue the interests of women in their community as opposed to the interests of a narrow client base. Rather, women may be constrained by the broader reality of social inequalities that persist along gender lines and affect the extent to which they can afford to deviate from status quo patterns of representation, as well as the extent to which they may even be motivated to do so.

## 5.0 CONCLUSION

### 5.1 OVERVIEW OF KEY FINDINGS

On the whole, the evidence presented in these three essays paints a stark picture of the prospects for cooperation among women on the basis of shared gender group membership alone. Indeed, the evidence suggests that differences among women consistent with cleavages along elite versus non-elite lines constitute a significant barrier to collective action in groups. I review the key insights of my dissertation below before proceeding to focus on how insights from intersectional scholarship can aid in interpreting the implications of these results for policy-makers seeking to address the problem of women's political inequality worldwide.

In the first essay, I examine whether women and men respond differently to the ethnic composition of group settings with the goal of demonstrating that there are important within-gender group differences in terms of the salience of ethnic group membership for individual behavior. I find weak evidence that women and men differ in terms of their willingness to cooperate with non-coethnics but strong evidence that strength of attachment to ethnic (i.e. sectarian) identity reinforces norms of coethnic favoritism among men but not among women. I also find that women with weaker attachment to their gender identity cooperate more in same-ethnic than in mixed-ethnic settings. This could suggest that increasing the salience of gender identity among women may help reduce barriers to cooperation among women across ethnic lines. However, the extent to which this is possible could depend on the ways in which women differ in other socially salient ways. For instance, I find that both men and women with access to benefits through politicians are less cooperative in mixed-ethnic

than in same-ethnic groups. I interpret this as evidence that it is not the case that women are inherently less biased against members of other ethnic groups than men are, but that women overall benefit less – in a material sense – from these networks, which makes them less susceptible to stronger norms of cooperation in same-ethnic compared to mixed-ethnic groups. Yet, these results suggest that women with access may differ from women without access to resources through existing political elite networks of clientelism. This suggests a potential cleavage among women along socio-economic class lines that informs the next two essays.

In the second essay, I develop a more focused analysis of cooperation among women (using men as a comparison group for perspective) and examine whether there are barriers to cooperation along socio-economic class lines. This investigation complements the finding in the first essay that women with access to benefits through the sectarian political system behave very differently in mixed-sect group settings than women without access. I find that both rich and poor women cooperate significantly less in mixed-class than in same-class groups, though the negative effect of the mixed-class setting is most pronounced for rich women. In contrasting this with what I observe for all-male groups, I find that the negative effect of the mixed-class group setting is unique to women in my sample. Given that the data was collected at a time of unusually heightened political discourse on the need to work across sect/ethnic and class lines, the persistence of the observation that class differences among women translate into barriers to cooperation is especially noteworthy. On the whole, both essays support my argument that it is important to examine within-gender group differences in cooperation because the logics thought to explain in-group favoritism in cooperation may not always apply to men and women in the same way depending on how gender interacts with the salience of other social, political, or economic group differences.

The third essay broadens the scope of inquiry to demonstrate how the institutional environment can also influence the behavior of politically connected women and yield different outcomes in terms of the types of constituent groups women politicians intend to prioritize. Drawing on survey responses from a sample of largely well-connected women candidates for reserved quota seats in Uganda, I find that women in non-competitive, party stronghold en-

vironments are significantly more likely to prioritize the needs and interests of more narrowly defined in-groups – such as political party agents, family and friends, and members of the same clan and same religion – than are women in competitive areas. At the same time, the likelihood of intending to represent all members of the community significantly increases as competition increases, while the level of support for prioritizing women constituents remains fairly consistent across electoral settings. Overall, this suggests that institutional conditions – such as the competitiveness of the electoral environment – influence the likelihood that women elected under reserved seats will advocate on behalf of the interests of the historically marginalized groups the quotas are designed to empower rather than perpetuating status quo distributions of political power through existing clientelistic networks. This suggests that it is possible broader gains for women overall are more likely to take place in competitive electoral areas, while benefits may be more likely to accrue to existing networks of political elites in less competitive electoral areas. Thus, the distribution of gains for women on the ground may be partly explained by the presence, or absence, of incentives for politically connected women to appeal to a broader range of voters outside of their immediate circle of existing political elites.

As laid out in the introductory chapter, I see the implications of my empirical investigations as evidence of the importance of taking the insights of theories of intersectionality seriously. Consistent with [Collins \(2015\)](#) and [Hancock \(2007\)](#), I see intersectionality as a critique of the “race-as-a-variable” approach in quantitative social science ([Harnois, 2010](#)). According to [Harnois \(2010\)](#), a major insight of intersectional scholarship is that reducing race (or other group categories) to a binary categorical variable is problematic because it assumes that all members of that category are influenced by the same set of characteristics and experiences in the same way. This can lead researchers to arrive at erroneous conclusions about why individuals behave a certain way in a given context and whether they can always be expected to behave that way. In particular, policies designed to correct historic imbalances in political power based on generalizations about women as a group may not be effective or sufficient in isolation and may even contribute to ignorance regarding the persistence of marginalization in some communities.

My dissertation applies this critical insight to an empirical investigation of the extent to which differences among women can inhibit cooperation around any collective interests that women might share on the basis of their shared experience as women. My finding that women face considerable barriers to cooperation along socio-economic class lines resonates with canonical examples of intersectional scholarship. For instance, [Dill \(1983\)](#) documents and explains how a long history of cross-cutting race and class cleavages create obstacles to mobilization among women in the United States. Moreover, the insight that elite women tend to cooperate with one another and reinforce existing distributions of political power that privilege them over other subgroups of women is consistent with evidence that group-based advocacy at the intersection of race, class, and gender tends to privilege the interests of those who are better off within the group than members of disadvantaged subgroups ([Strolovitch, 2006](#)). This is also consistent with my finding that politically well-connected women are not more likely to direct their efforts in policy-making toward disadvantaged or marginalized constituent groups unless the electoral environment incentivizes them to do so. In the absence of electoral accountability, politically well-connected women candidates may be more likely to reinforce status quo patterns of inequality in access to benefits than to work to correct them.

## 5.2 IMPLICATIONS FOR POLICY-MAKING

Arguably the most important application of intersectional theory to my findings lies with interpreting the results to inform policy-making that could better address gender inequality on a broad scale. In this section, I elaborate on several key policy recommendations that emerge from my findings when considered from an intersectional perspective.

First, given the evidence that well-connected and wealthy women may be more likely to prioritize the interests of other elite women over the interests of women in general, some might conclude that quota-based seats for women in politics are a bad idea since they are prone to elite capture. Instead, I argue that the potential for elite women to abuse their



access to political power is evidence of a kind of gender equality in political participation since these “bad” practices are emblematic of the patron-client politics of male-dominated political networks in many societies where political corruption and in-group favoritism rule (Goetz, 2007). Rather than abandoning quotas for women’s representation altogether in these contexts, I argue that we need to consider implementing other policies and reforms alongside quotas that help to address the problems identified by examining the cleavages among women within these settings. In particular, my evidence suggests that women from different socio-economic backgrounds are less likely to work with one another in the pursuit of collective gains. This makes it problematic if all women holding quota seats come from the same, upper-income background. While they may work well together, they will not necessarily share the same policy priorities as lower-income women which could result in these women’s needs going largely unaddressed even though the semblance of having representation is there in the form of “women representatives.” This is the danger that intersectionality warns against, the perception that all women are represented when it is possible that the interests of only a subset of women really are.

To address this issue, policy-makers should consider adopting quotas in the context of reforms that aid in increasing the diversity of women candidates competing for seats. In particular, my research draws attention to the need to vary the representation of candidates from different socio-economic backgrounds. Some examples of reforms that could help in this context involve reducing financial barriers to entry for candidates. For example, policy-makers could begin to address political inequities along class lines that are magnified by cross-cutting inequalities along gender lines by correcting structural inequalities between men and women in access to resources (including financial and social capital) (Pateman, 1988, 1996). For instance, Pateman (2011) argues for a basic income guarantee to help level the playing field with respect to financial security which can greatly influence the ability of women in particular to effectively participate in public decision-making. As well, campaign finance reform could help reduce barriers to candidate entry that systematically disadvantage women relative to men in many countries where women lack the same degree of access to financial resources or social networks due to their marginalization within the labor force (Franceschet, Krook and Piscopo, 2012). Other examples speak to how changes

in procedures could help alleviate pressures that disproportionately disadvantage women of limited financial means. In interviews with women representatives in local government in Uganda, I frequently heard women ask that the voting process be more localized (reducing the need to travel long distances, which can be prohibitively expensive), as well as consolidated to a single day (streamlining the process to vote on all positions on a single day on a single ballot also lowers costs and barriers to entry for voters as well as candidates). In some cases, these types of adjustments to the political process may help reduce the salience of these structural inequalities and create more opportunities for women outside of elite political circles to compete for elected office. This could increase electoral competition, which could in turn incentivize candidates to appeal to a broader swath of the electorate.

Another possible approach to improving the utility of quotas for addressing women's political inequality might be to expand the size of the quota requirement. In most settings, quotas for women's representation in politics are set somewhere below 50 percent. In increasing the share of seats held by women and thus the count of women in office, it is reasonable to expect that this could lead to more diversity among those women holding office. Greater diversity among women representatives could translate into a higher likelihood that the interests of a broader range of women in the population as a whole will be represented. In any case, my findings clearly point toward the need to empower more different types of women, which necessarily entails tackling barriers to political participation that exist for women not only on the basis of their gender identity, but because of how their gender group membership intersects with other aspects of how they are situated in society.

Finally, my findings yield insights into opportunities for mobilizing women across group lines. The evidence of socio-economic class divisions among women is particularly striking in my dissertation, perhaps even more so given the suggestive evidence that women are even more responsive to class cleavages than to ethnic cleavages in some settings. This suggests that an important new avenue for applied work is in the area of understanding how to breakdown class divisions among women, but also to better understand the micro-foundations behind why this cleavage appears to be especially salient in interactions between women. On the one hand, my results suggest that women may be especially amenable

to mobilizing for collective action within socio-economic class groups, regardless of ethnic divisions. But on the other hand, they suggest that there is a real need to figure out how to reduce barriers to cooperation among women across class lines. This could be a fruitful area for new work on inter-group contact, democratic deliberation, cooperation, and collaboration. In this context, intersectionality reminds us that these differences among women in terms of socio-economic status and political connectedness are not given as fixed, but instead can take on different meanings given a different context. For instance, rather than framing wealth inequality among women as a threat or cause for division that impedes progress in other areas of shared interest, group dialogues could help women find common ground and a rallying point for collective efforts. My argument here echoes [Collins \(2015, 8\)](#) in her description of the work of [Valk \(2008\)](#), whom she describes as detailing the efforts of women’s organizations to build broad coalitions across categories of “race, class, gender, and sexuality” in order to push for policy change on issues of shared interest that “linked African American identity politics with those of white women across class and sexual orientation.” A key insight here is that perceptions of the importance of socio-economic and ethnic cleavages are malleable. These differences can become less salient in the context of an elevated sense of collective gains to be had from cooperating on “collective interests” shared across subgroups of women. Presenting women with opportunities and spaces in which to articulate and discover these shared interests as well as act on them could go a long way towards building cross-categorical coalitions with the power to enact the kind of changes that could have widespread impacts on gender inequality in society at large.

### 5.3 FUTURE DIRECTIONS FOR RESEARCH

Fundamentally, this dissertation is about unpacking the complexity inside group categories. Consequently, it is also about the dangers of failing to consider how variation within groups is related to very different patterns of behavior and attitudes than what might be expected based on assumptions about the group as a whole. As such, this body of work joins that of

others in recent years to encourage researchers and policymakers alike to pay more attention to how individuals are shaped and influenced by the many contextual factors that surround their decision-making processes in any given moment. Some of these are social or political differences in group membership or belonging, others are related to the broader institutional context or the ways in which that context interacts with and alters the salience of group categories and the norms and values linked to them. While there is clearly value in identifying broad patterns of behavior associated with group categorizations, it is also important to be vigilant to the ways in which these patterns shift given certain conditions.

As the results presented in these essays show, some of the ambiguity in empirical findings related to studies of gender, representation, cooperation, ethnic politics, and socio-economic status may be due to the complexity of group membership and categorization. Following other scholars in this area, I encourage future research to re-examine the evidence collected to date and consider how it could be re-evaluated or reinterpreted given more careful attention to the fact that many group-level categories used to identify individuals (such as gender) suggest different kinds of behaviors in different social settings because of the way in which they interact with other facts that can vary at the individual level. This is an important position to adopt because of what it can tell researchers and policymakers about the possibilities for a policy based on generalizations about group categories to address the political marginalization of all group members. My empirical tests illustrate how ending gender inequality in political participation on a large scale will require a more proactive approach to understanding how individuals are situated within institutional structures that manipulate the salience of perceived group differences with differential impacts on individual behavior.

## APPENDIX A

### BALANCE CHECK FOR MIXED-SECT TREATMENT

The screening and pre-treatment surveys contain a large number of pre-treatment covariates that can be used to check balance. Table 9 shows the results of the balance test for our full sample overall using 56 pre-treatment covariates. We also present the balance test for our women’s subsample (Table 10) and for our men’s subsample (Table 11) to confirm that the randomization was equally effective across the relevant gender subgroups. While we check balance using the individual covariates, we also use inverse covariance weighting to create pre-specified indices for measures that capture a common underlying concept, as described in Section 2.4.2 of the main text. In all three balance tables, we present results of the balance tests for the individual covariates as well as for the indices but note that if there is an imbalance in an index component there is likely to be imbalance in the index itself. We test for balance by running our main estimation equation specified in Section 2.4.2 of the main paper. Specifically, we run a weighted least squares regression of each covariate on the treatment assignment indicator (excluding other covariates), where weights account for unequal treatment assignment probabilities in ‘smaller’ strata (see discussion in the Appendix for the second dissertation chapter).

The balance test for the full sample shown in Table 9 demonstrates that only 3 out of 56 covariates are significant at the 95 percent confidence level, well within what we would expect to observe by chance. The vast majority of the coefficients are close to zero as well. Similarly, the balance test for women shown in Table 10 reveals that only 3 out of 56 covariates are

significant at the 95 percent confidence level, which is also about what we would expect to happen by chance. Also as expected, the coefficients are close to zero for most covariates. The balance test for men shown in Table 11 reveals that 5 out of 56 covariates are significant at the 95 percent confidence level, which is still within what we would expect to see by chance. Also as expected, the coefficients are close to zero for most covariates.

These results help to address concerns about the integrity of the randomization described in the Appendix for the second dissertation chapter. In our main analysis we nevertheless control for indices and individual variables to address further concerns, with the exception of excluding the final 5 variables presented in the balance table (‘people in the group known prior to the session’ and ‘answered all practice problem questions correctly’). Since pay-off comprehension was measured after exposure to the group composition treatment (same-versus mixed-class), we instead use this measure as a robustness check instead in Appendix C.1, where we also check the robustness of our main results to the inclusion of the variable representing ‘people in the group known prior to the session.’ Taken together, these additional balance tests lend support to our contention that the randomization procedure was largely effective in ensuring that unobservable (and observable) characteristics are likely to be evenly distributed across our treatment (mixed-sect) and control (same-sect) groups.

Table 9: Balance check for the full sample (includes men and women).

	Control Mean (Same Sect)	Mixed Sect <i>b</i>	<i>p-value</i>
Age	31.95	-0.78	0.324
Married (%)	0.49	0.04	0.295
Post-secondary education (%)	0.66	0.03	0.483
Christian (%)	0.33	0.00	0.940
Shia (%)	0.33	0.00	0.966
Sunni (%)	0.33	0.00	0.972
Economic status index	-0.03	0.04	0.575
Value of total household assets	1.63	0.01	0.872
Estimated area (size) of household	1.69	0.04	0.514
Owns a summer house	2.03	0.01	0.936
Power alternatives during an outage	2.56	-0.01	0.839
Can afford to vacation at least once per year	1.88	0.00	0.995
Frequency of dining out per month	2.09	0.03	0.571
Monthly household net income	6.70	0.07	0.571
Subjective monthly household income	3.30	-0.02	0.808
Total net monthly household income	6.26	-0.02	0.896
Household's economic class	1.02	0.03	0.639
Students (%)	0.14	0.00	0.935
Homemakers (%)	0.23	0.00	0.919
Prejudice against members of other sects index	0.06	-0.12	0.115
Marrying someone from another sect (discomfort coded high)	2.30	-0.08	0.334
Having a physician from another sect (discomfort coded high)	1.36	-0.05	0.327
Being neighbors with someone from another sect (discomfort coded high)	1.58	-0.11	0.058
Discussing politics with someone from another sect (discomfort coded high)	2.07	-0.07	0.422
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.62	-0.01	0.874
Being supervised at work by someone from another sect (discomfort coded high)	1.70	-0.07	0.259
Being friends with someone from another sect (discomfort coded high)	1.40	-0.11	0.026
Political activity/engagement index	0.03	-0.03	0.688
Discussed issues with family, friends, or neighbors	0.71	0.01	0.853
Talked to party members/Zaim/MPs about political issues	0.12	0.00	0.938
Signed a petition	0.07	-0.02	0.306
Attended a demonstration/protest march	0.37	0.00	0.927
Homogeneity of social networks (sect and class) index	0.09	-0.19	0.015
Family, friends, acquaintances in other economic classes (none coded high)	2.92	-0.13	0.085
Family, friends, acquaintances in other sects (none coded high)	2.75	-0.17	0.037
Frequency discussing issues with people you disagree with often	2.30	0.02	0.713
Strength of sectarian identity index	0.04	-0.09	0.243
Willingness to change official sectarian affiliation (unwilling coded high)	3.47	-0.11	0.088
Political party (1=supports a sectarian party)	0.48	-0.02	0.616
Relative strength of sectarian identity (strong coded high)	4.30	0.00	0.986
Connectedness to sectarian leaders for access to benefits index	0.00	-0.02	0.842
Access to benefits through Zaim/politician	1.87	0.02	0.791
Access to benefits through a religious leaders	2.13	-0.05	0.531
Strength of age group identity (strong coded high)	4.52	0.04	0.798
Strength of gender identity (strong coded high)	5.08	0.01	0.964
Strength of class identity (strong coded high)	3.90	-0.07	0.650
Strength of Lebanese identity (strong coded high)	5.55	0.10	0.488
Strength of occupational identity (strong coded high)	4.78	-0.28	0.071
Binary indicator for Moderator	0.42	-0.04	0.276
Number of participants in session	0.94	0.02	0.202
People in the group known prior to the session	0.06	0.07	0.057
Days until the next election	62.94	-3.64	0.106
Answered all practice problem questions correctly (%)	0.82	0.04	0.207
Correctly answered amount earned from Group Pot (%)	0.97	0.01	0.508
Correctly answered Group Pot share (%)	0.90	0.02	0.415
Correctly answered total earned (%)	0.91	0.01	0.642

Notes: *P*-values are from a two-tailed test. Robust standard errors in parentheses. *N*=713.

Table 10: Balance check for women's sample only.

	Control Mean (Same Sect)	Mixed Sect <i>b</i>	<i>p-value</i>
Age	37.03	-1.92	0.158
Married (%)	0.72	0.00	0.977
Post-secondary education (%)	0.60	0.02	0.709
Christian (%)	0.33	0.00	1.000
Shia (%)	0.33	0.00	0.956
Sunni (%)	0.33	0.00	0.957
Economic status index	-0.11	0.04	0.696
Value of total household assets	1.61	0.02	0.858
Estimated area (size) of household	1.69	0.04	0.587
Owns a summer house	2.04	-0.02	0.895
Power alternatives during an outage	2.50	-0.03	0.820
Can afford to vacation at least once per year	1.83	-0.01	0.949
Frequency of dining out per month	2.04	0.04	0.680
Monthly household net income	6.60	0.07	0.728
Subjective monthly household income	3.28	-0.02	0.885
Total net monthly household income	6.16	-0.19	0.388
Household's economic class	1.02	0.05	0.553
Students (%)	0.11	-0.01	0.800
Homemakers (%)	0.57	0.00	0.939
Prejudice against members of other sects index	0.21	-0.12	0.331
Marrying someone from another sect (discomfort coded high)	2.60	-0.17	0.213
Having a physician from another sect (discomfort coded high)	1.36	0.01	0.888
Being neighbors with someone from another sect (discomfort coded high)	1.58	-0.13	0.153
Discussing politics with someone from another sect (discomfort coded high)	2.17	0.03	0.836
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.65	0.10	0.347
Being supervised at work by someone from another sect (discomfort coded high)	1.73	-0.18	0.061
Being friends with someone from another sect (discomfort coded high)	1.44	-0.18	0.030
Political activity/engagement index	-0.13	-0.10	0.425
Discussed issues with family, friends, or neighbors	0.65	0.03	0.666
Talked to party members/Zaim/MPs about political issues	0.11	-0.02	0.692
Signed a petition	0.06	-0.04	0.131
Attended a demonstration/protest march	0.29	-0.06	0.318
Homogeneity of social networks (sect and class) index	0.16	-0.07	0.606
Family, friends, acquaintances in other economic classes (none coded high)	2.93	-0.03	0.833
Family, friends, acquaintances in other sects (none coded high)	2.85	-0.09	0.547
Frequency discussing issues with people you disagree with often	2.30	0.09	0.361
Strength of sectarian identity index	0.13	-0.07	0.586
Willingness to change official sectarian affiliation (unwilling coded high)	3.52	-0.01	0.926
Political party (1=supports a sectarian party)	0.51	-0.08	0.282
Relative strength of sectarian identity (strong coded high)	4.37	0.08	0.750
Connectedness to sectarian leaders for access to benefits index	-0.24	0.11	0.345
Access to benefits through Zaim/politician	1.64	0.10	0.349
Access to benefits through a religious leaders	1.93	0.09	0.469
Strength of age group identity (strong coded high)	4.43	0.13	0.602
Strength of gender identity (strong coded high)	5.46	-0.16	0.514
Strength of class identity (strong coded high)	3.86	-0.15	0.519
Strength of Lebanese identity (strong coded high)	5.40	0.15	0.534
Strength of occupational identity (strong coded high)	4.50	-0.49	0.046
Binary indicator for Moderator	0.46	-0.12	0.036
Number of participants in session	0.96	-0.03	0.352
People in the group known prior to the session	0.03	0.07	0.042
Days until the next election	63.57	-5.02	0.079
Answered all practice problem questions correctly (%)	0.85	0.05	0.185
Correctly answered amount earned from Group Pot (%)	0.97	0.02	0.169
Correctly answered Group Pot share (%)	0.94	-0.01	0.672
Correctly answered total earned (%)	0.91	0.06	0.057

Notes: *P-values are from a two-tailed test. Robust standard errors in parentheses. N=285.*



Table 11: Balance check for men's sample only.

	Control Mean (Same Sect)	Mixed Sect <i>b</i>	<i>p-value</i>
Age	28.57	-0.02	0.982
Married (%)	0.33	0.07	0.154
Post-secondary education (%)	0.70	0.03	0.544
Christian (%)	0.33	0.00	0.923
Shia (%)	0.33	0.00	0.922
Sunni (%)	0.33	0.00	1.000
Economic status index	0.02	0.04	0.682
Value of total household assets	1.65	0.01	0.946
Estimated area (size) of household	1.70	0.03	0.683
Owns a summer house	2.03	0.02	0.832
Power alternatives during an outage	2.60	-0.01	0.934
Can afford to vacation at least once per year	1.90	0.00	0.965
Frequency of dining out per month	2.13	0.03	0.693
Monthly household net income	6.76	0.06	0.655
Subjective monthly household income	3.32	-0.03	0.846
Total net monthly household income	6.32	0.09	0.611
Household's economic class	1.02	0.01	0.882
Students (%)	0.15	0.00	0.941
Homemakers (%)	0.00	0.00	0.655
Prejudice against members of other sects index	-0.04	-0.13	0.212
Marrying someone from another sect (discomfort coded high)	2.09	-0.02	0.868
Having a physician from another sect (discomfort coded high)	1.36	-0.09	0.141
Being neighbors with someone from another sect (discomfort coded high)	1.57	-0.10	0.200
Discussing politics with someone from another sect (discomfort coded high)	2.00	-0.14	0.199
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.61	-0.09	0.292
Being supervised at work by someone from another sect (discomfort coded high)	1.68	0.00	0.990
Being friends with someone from another sect (discomfort coded high)	1.38	-0.07	0.278
Political activity/engagement index	0.13	0.01	0.925
Discussed issues with family, friends, or neighbors	0.74	-0.01	0.895
Talked to party members/Zaim/MPs about political issues	0.13	0.01	0.838
Signed a petition	0.08	-0.01	0.729
Attended a demonstration/protest march	0.42	0.03	0.538
Homogeneity of social networks (sect and class) index	0.05	-0.27	0.005
Family, friends, acquaintances in other economic classes (none coded high)	2.91	-0.20	0.041
Family, friends, acquaintances in other sects (none coded high)	2.68	-0.23	0.020
Frequency discussing issues with people you disagree with often	2.31	-0.02	0.785
Strength of sectarian identity index	-0.01	-0.11	0.287
Willingness to change official sectarian affiliation (unwilling coded high)	3.44	-0.19	0.036
Political party (1=supports a sectarian party)	0.46	0.02	0.751
Relative strength of sectarian identity (strong coded high)	4.25	-0.06	0.785
Connectedness to sectarian leaders for access to benefits index	0.16	-0.10	0.372
Access to benefits through Zaim/politician	2.02	-0.03	0.760
Access to benefits through a religious leaders	2.27	-0.14	0.194
Strength of age group identity (strong coded high)	4.58	-0.02	0.911
Strength of gender identity (strong coded high)	4.82	0.12	0.559
Strength of class identity (strong coded high)	3.93	-0.01	0.959
Strength of Lebanese identity (strong coded high)	5.64	0.08	0.703
Strength of occupational identity (strong coded high)	4.96	-0.14	0.445
Binary indicator for Moderator	0.39	0.01	0.767
Number of participants in session	0.92	0.06	0.017
People in the group known prior to the session	0.08	0.06	0.233
Days until the next election	62.51	-2.72	0.401
Answered all practice problem questions correctly (%)	0.80	0.03	0.517
Correctly answered amount earned from Group Pot (%)	0.97	0.00	0.977
Correctly answered Group Pot share (%)	0.88	0.04	0.209
Correctly answered total earned (%)	0.92	-0.02	0.489

Notes: *P-values are from a two-tailed test. Robust standard errors in parentheses. N=428.*

## **APPENDIX B**

### **SUMMARY STATISTICS**

#### **B.1 OVERVIEW OF THE DATA**

Table 12: Summary statistics for women only and men only.

	Women Only				Men Only			
	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Age	36.07	11.17	19	60	28.56	8.36	18	65
Married (%)	0.72	0.45	0	1	0.36	0.48	0	1
Post-secondary education (%)	0.61	0.49	0	1	0.71	0.45	0	1
Christian (%)	0.33	0.47	0	1	0.34	0.47	0	1
Shia (%)	0.33	0.47	0	1	0.33	0.47	0	1
Sunni (%)	0.33	0.47	0	1	0.33	0.47	0	1
Economic status index	-0.09	0.90	-2.07	2.24	0.05	1.05	-2.26	2.28
Value of total household assets	1.61	0.71	1	3	1.65	0.79	1	3
Estimated area (size) of household	1.72	0.68	1	3	1.71	0.75	1	3
Owns a summer house	2.03	0.98	1	3	2.04	0.97	1	3
Power alternatives during an outage	2.49	0.88	1	5	2.60	0.99	1	5
Can afford to vacation at least once per year	1.83	0.84	1	3	1.91	0.85	1	3
Frequency of dining out per month	2.06	0.72	1	3	2.14	0.74	1	3
Monthly household net income	6.63	1.59	1	10	6.80	1.44	1	10
Subjective monthly household income	3.27	1.28	1	5	3.31	1.34	1	5
Total net monthly household income	6.07	1.77	1	11	6.37	1.85	1	12
Household's economic class	1.04	0.65	0	2	1.02	0.73	0	2
Students (%)	0.11	0.31	0	1	0.15	0.36	0	1
Homemakers (%)	0.57	0.50	0	1	0.00	0.06	0	1
Prejudice against members of other sects index	0.15	0.98	-1.23	4.12	-0.11	1.01	-1.23	4.12
Marrying someone from another sect (discomfort coded high)	2.52	1.09	1	4	2.08	0.98	1	4
Having a physician from another sect (discomfort coded high)	1.36	0.66	1	4	1.32	0.60	1	4
Being neighbors with someone from another sect (discomfort coded high)	1.52	0.72	1	4	1.52	0.76	1	4
Discussing politics with someone from another sect (discomfort coded high)	2.18	1.11	1	4	1.93	1.03	1	4
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.70	0.86	1	4	1.57	0.80	1	4
Being supervised at work by someone from another sect (discomfort coded high)	1.64	0.78	1	4	1.68	0.87	1	4
Being friends with someone from another sect (discomfort coded high)	1.35	0.65	1	4	1.35	0.64	1	4
Political activity/engagement index	-0.17	0.94	-1.18	3.46	0.13	1.03	-1.18	3.46
Discussed issues with family, friends, or neighbors	0.66	0.47	0	1	0.74	0.44	0	1
Talked to party members/Zaim/MPs about political issues	0.10	0.30	0	1	0.13	0.34	0	1
Signed a petition	0.04	0.19	0	1	0.08	0.27	0	1
Attended a demonstration/protest march	0.27	0.44	0	1	0.43	0.50	0	1
Homogeneity of social networks (sect and class) index	0.13	1.06	-2.20	2.83	-0.09	0.95	-2.20	2.83
Family, friends, acquaintances in other economic classes (none coded high)	2.92	0.98	1	5	2.81	0.97	1	5
Family, friends, acquaintances in other sects (none coded high)	2.81	1.18	1	5	2.56	1.01	1	5
Frequency discussing issues with people you disagree with often	2.34	0.82	1	4	2.30	0.80	1	4
Strength of sectarian identity index	0.09	0.97	-2.73	1.52	-0.07	1.02	-2.73	1.52
Willingness to change official sectarian affiliation (unwilling coded high)	3.52	0.78	1	4	3.34	0.86	1	4
Political party (1=supports a sectarian party)	0.48	0.50	0	1	0.47	0.50	0	1
Relative strength of sectarian identity (strong coded high)	4.41	2.01	1	7	4.22	2.13	1	7
Connectedness to sectarian leaders for access to benefits index	-0.19	0.92	-1.11	2.36	0.11	1.03	-1.11	2.36
Access to benefits through Zaim/politician	1.69	0.87	1	4	2.00	1.03	1	4
Access to benefits through a religious leaders	1.98	0.97	1	4	2.20	1.01	1	4
Strength of age group identity (strong coded high)	4.49	1.94	1	7	4.57	1.85	1	7
Strength of gender identity (strong coded high)	5.38	1.87	1	7	4.88	1.93	1	7
Strength of class identity (strong coded high)	3.78	1.84	1	7	3.93	1.83	1	7
Strength of Lebanese identity (strong coded high)	5.48	1.88	1	7	5.68	1.78	1	7
Strength of occupational identity (strong coded high)	4.26	1.91	1	7	4.88	1.77	1	7
Binary indicator for Moderator	0.40	0.49	0	1	0.40	0.49	0	1
Number of participants in session	0.95	0.23	0	1	0.95	0.22	0	1
People in the group known prior to the session	0.06	0.29	0	3	0.11	0.52	0	5
Days until the next election	61.07	23.57	33	94	61.15	32.21	17	109
Answered all practice problem questions correctly (%)	0.88	0.33	0	1	0.82	0.39	0	1
Correctly answered amount earned from Group Pot (%)	0.98	0.14	0	1	0.97	0.18	0	1
Correctly answered Group Pot share (%)	0.93	0.25	0	1	0.90	0.30	0	1
Correctly answered total earned (%)	0.94	0.25	0	1	0.91	0.29	0	1

**Notes:** Summary statistics for the imputed data used in the analysis. All indices include weights that correct for heterogeneous treatment assignment probabilities across strata.

Table 13: Summary statistics for the full sample.

	Full Sample			
	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Age	31.57	10.26	18	65
Married (%)	0.51	0.50	0	1
Post-secondary education (%)	0.67	0.47	0	1
Christian (%)	0.33	0.47	0	1
Shia (%)	0.33	0.47	0	1
Sunni (%)	0.33	0.47	0	1
Economic status index	-0.01	1.00	-2.26	2.28
Value of total household assets	1.64	0.76	1	3
Estimated area (size) of household	1.71	0.72	1	3
Owns a summer house	2.04	0.97	1	3
Power alternatives during an outage	2.55	0.95	1	5
Can afford to vacation at least once per year	1.87	0.85	1	3
Frequency of dining out per month	2.11	0.73	1	3
Monthly household net income	6.73	1.50	1	10
Subjective monthly household income	3.29	1.31	1	5
Total net monthly household income	6.25	1.83	1	12
Household's economic class	1.03	0.70	0	2
Students (%)	0.13	0.34	0	1
Homemakers (%)	0.23	0.42	0	1
Prejudice against members of other sects index	0.00	1.00	-1.23	4.12
Marrying someone from another sect (discomfort coded high)	2.26	1.05	1	4
Having a physician from another sect (discomfort coded high)	1.34	0.63	1	4
Being neighbors with someone from another sect (discomfort coded high)	1.52	0.74	1	4
Discussing politics with someone from another sect (discomfort coded high)	2.03	1.07	1	4
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.62	0.83	1	4
Being supervised at work by someone from another sect (discomfort coded high)	1.66	0.83	1	4
Being friends with someone from another sect (discomfort coded high)	1.35	0.65	1	4
Political activity/engagement index	0.01	1.01	-1.18	3.46
Discussed issues with family, friends, or neighbors	0.71	0.45	0	1
Talked to party members/Zaim/MPs about political issues	0.12	0.33	0	1
Signed a petition	0.06	0.24	0	1
Attended a demonstration/protest march	0.37	0.48	0	1
Homogeneity of social networks (sect and class) index	0.00	1.00	-2.20	2.83
Family, friends, acquaintances in other economic classes (none coded high)	2.85	0.98	1	5
Family, friends, acquaintances in other sects (none coded high)	2.66	1.08	1	5
Frequency discussing issues with people you disagree with often	2.32	0.81	1	4
Strength of sectarian identity index	0.00	1.00	-2.73	1.52
Willingness to change official sectarian affiliation (unwilling coded high)	3.41	0.84	1	4
Political party (1=supports a sectarian party)	0.47	0.50	0	1
Relative strength of sectarian identity (strong coded high)	4.29	2.08	1	7
Connectedness to sectarian leaders for access to benefits index	-0.01	1.00	-1.11	2.36
Access to benefits through Zaim/politician	1.88	0.98	1	4
Access to benefits through a religious leaders	2.11	1.00	1	4
Strength of age group identity (strong coded high)	4.54	1.88	1	7
Strength of gender identity (strong coded high)	5.08	1.92	1	7
Strength of class identity (strong coded high)	3.87	1.84	1	7
Strength of Lebanese identity (strong coded high)	5.60	1.83	1	7
Strength of occupational identity (strong coded high)	4.63	1.86	1	7
Binary indicator for Moderator	0.40	0.49	0	1
Number of participants in session	0.95	0.22	0	1
People in the group known prior to the session	0.09	0.45	0	5
Days until the next election	61.12	29.06	17	109
Answered all practice problem questions correctly (%)	0.84	0.37	0	1
Correctly answered amount earned from Group Pot (%)	0.97	0.17	0	1
Correctly answered Group Pot share (%)	0.91	0.28	0	1
Correctly answered total earned (%)	0.92	0.27	0	1

**Notes:** Summary statistics for the imputed data used in the analysis. All indices include weights that correct for heterogeneous treatment assignment probabilities across strata.

## B.2 GENDER DIFFERENCES IN BACKGROUND CHARACTERISTICS

Table 14: Significant differences between men and women on pre-treatment covariates.

Variable Description	Men's Mean	Women's Mean	Test of the Difference <i>b</i>	Difference <i>p-value</i>
Age	28.56	36.07	7.50	0.000
Married (%)	0.36	0.72	0.36	0.000
Post-secondary education (%)	0.71	0.61	-0.10	0.007
Christian (%)	0.34	0.33	0.00	0.951
Shia (%)	0.33	0.33	0.00	0.916
Sunni (%)	0.33	0.33	0.00	0.966
Economic status index	0.05	-0.09	-0.13	0.079
Value of total household assets	1.65	1.61	-0.04	0.472
Estimated area (size) of household	1.71	1.72	0.01	0.907
Owns a summer house	2.04	2.03	-0.01	0.945
Power alternatives during an outage	2.60	2.49	-0.11	0.143
Can afford to vacation at least once per year	1.91	1.83	-0.08	0.235
Frequency of dining out per month	2.14	2.06	-0.09	0.134
Monthly household net income	6.80	6.63	-0.16	0.175
Subjective monthly household income	3.31	3.27	-0.04	0.694
Total net monthly household income	6.37	6.07	-0.30	0.038
Household's economic class	1.02	1.04	0.02	0.694
Students (%)	0.15	0.11	-0.04	0.107
Homemakers (%)	0.00	0.57	0.56	0.000
Prejudice against members of other sects index	-0.11	0.15	0.26	0.002
Marrying someone from another sect (discomfort coded high)	2.08	2.52	0.44	0.000
Having a physician from another sect (discomfort coded high)	1.32	1.36	0.04	0.395
Being neighbors with someone from another sect (discomfort coded high)	1.52	1.52	0.00	0.996
Discussing politics with someone from another sect (discomfort coded high)	1.93	2.18	0.26	0.006
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.57	1.70	0.13	0.050
Being supervised at work by someone from another sect (discomfort coded high)	1.68	1.64	-0.04	0.549
Being friends with someone from another sect (discomfort coded high)	1.35	1.35	0.00	0.968
Political activity/engagement index	0.13	-0.17	-0.31	0.009
Discussed issues with family, friends, or neighbors	0.74	0.66	-0.07	0.039
Talked to party members/Zaim/MPs about political issues	0.13	0.10	-0.03	0.235
Signed a petition	0.08	0.04	-0.04	0.021
Attended a demonstration/protest march	0.43	0.27	-0.17	0.000
Homogeneity of social networks (sect and class) index	-0.09	0.13	0.22	0.008
Family, friends, acquaintances in other economic classes (none coded high)	2.81	2.92	0.11	0.148
Family, friends, acquaintances in other sects (none coded high)	2.56	2.81	0.24	0.006
Frequency discussing issues with people you disagree with often	2.30	2.34	0.05	0.467
Strength of sectarian identity index	-0.07	0.09	0.16	0.047
Willingness to change official sectarian affiliation (unwilling coded high)	3.34	3.52	0.17	0.009
Political party (1=supports a sectarian party)	0.47	0.48	0.01	0.821
Relative strength of sectarian identity (strong coded high)	4.22	4.41	0.19	0.247
Connectedness to sectarian leaders for access to benefits index	0.11	-0.19	-0.30	0.000
Access to benefits through Zaim/politician	2.00	1.69	-0.31	0.000
Access to benefits through a religious leaders	2.20	1.98	-0.22	0.008
Strength of age group identity (strong coded high)	4.57	4.49	-0.08	0.644
Strength of gender identity (strong coded high)	4.88	5.38	0.50	0.002
Strength of class identity (strong coded high)	3.93	3.78	-0.14	0.332
Strength of Lebanese identity (strong coded high)	5.68	5.48	-0.20	0.209
Strength of occupational identity (strong coded high)	4.88	4.26	-0.63	0.000
Binary indicator for Moderator	0.40	0.40	0.00	0.987
Number of participants in session	0.95	0.95	0.00	0.887
People in the group known prior to the session	0.11	0.06	-0.04	0.155
Days until the next election	61.15	61.07	-0.09	0.968
Answered all practice problem questions correctly (%)	0.82	0.88	0.06	0.025
Correctly answered amount earned from Group Pot (%)	0.97	0.98	0.01	0.232
Correctly answered Group Pot share (%)	0.90	0.93	0.03	0.143
Correctly answered total earned (%)	0.91	0.94	0.03	0.221

*Notes:* All indices include weights that correct for heterogeneous treatment assignment probabilities across strata.

## APPENDIX C

### SENSITIVITY ANALYSIS

#### C.1 ROBUSTNESS CHECKS FOR THE MAIN AVERAGE TREATMENT EFFECT

As an additional robustness check to confirm the validity of the results, we also run all models with two additional control variables that could have influenced the findings. First, we include an additional indicator for the number of group members an individual knew prior to participating in the experiment. Research shows that interacting with friends or acquaintances rather than strangers affects contributions in cooperation games. Second, we include a measure that captures participants' comprehension of the public goods game payoff structure that we created by scoring answers in a 'Practice Problem' as correct or incorrect. This helps us control for the possibility that some participants may have played non-strategically because of confusion over payoffs. In addition to checking the sensitivity of the main ATE result to the inclusion of these additional control variables, we also implement the analysis with the full slate of controls (including these additional two) but with strata fixed effects as well.

In Table [15](#) below, Models 1 and 2 replicate the results presented in the main text, while Model 3 includes just the additional two control variables and Model 4 includes the additional controls and strata fixed effects. The results do not indicate that our analysis in the main

text is especially sensitive to the model specification. We observe similar patterns in the main dependent variable across specifications that include control variables, and the incorporation of strata fixed effects only increases precision; it does not change our interpretation of the evidence.

Table 15: Sensitivity analysis of the main average treatment effect.

	<i>Same Sect Mean</i>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<i>N</i>
<b>Women's Groups</b>						
<i>Mixed sect</i>	3471	-11 (376) 0.977	-224 (399) 0.574	-173 (409) 0.672	-222 (423) 0.600	285
<b>Men's Groups</b>						
<i>Mixed sect</i>	3762	-398 (343) 0.247	-465 (343) 0.175	-452 (345) 0.191	-675* (356) 0.059	428

*\*p<0.10 \*\*p<0.05 \*\*\*p<0.01 Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects; Model 3 is Model 2 with two additional controls; Model 4 is Model 3 with strata fixed effects.*

## C.2 ALTERNATIVE MEASURES OF STRENGTH OF IDENTIFICATION

To confirm the robustness of the results to alternative specifications of the variables used in the subgroup analysis in Section 2.5, we also present the conditional marginal effect of the mixed-sect group treatment for alternative measures of attachment to sectarian and gender identity. Specifically, Table 16 shows the subgroup analysis if individuals are coded according to whether a given identity is ranked in their top three most important social identities.

With respect to the coding of the measure of attachment to sectarian identity presented in Panel A, we note that there are some slight differences with respect to the results presented in the main text. While we still observe a null effect of the mixed-sect treatment on cooperation for both weak and strong sectarian women, in this case we see evidence that the gap in terms of how strong sectarian and weak sectarian women respond to the mixed-sect group treatment

Table 16: Conditional marginal effects for various levels of identification.

	<b>Women's Groups (n = 285)</b>			<b>Men's Groups (n = 428)</b>		
	<i>Same Sect Mean</i>	<b>Mixed Sect (b/se/p)</b>		<i>Same Sect Mean</i>	<b>Mixed Sect (b/se/p)</b>	
		<i>Model 1</i>	<i>Model 2</i>		<i>Model 1</i>	<i>Model 2</i>
<b>Panel A: Strength of attachment to Sectarian ID</b>						
<i>Weak Sectarian ID</i> ( <i>Sectarian ID is not top 3</i> )	3023	471 (528) 0.373	147 (570) 0.797	3571	-249 (487) 0.608	-230 (503) 0.647
<i>Strong Sectarian ID</i> ( <i>Sectarian ID is top 3</i> )	3888	-463 (559) 0.408	-569 (554) 0.305	3942	-535 (504) 0.289	-646 (495) 0.193
<b>Panel B: Strength of attachment to Gender ID</b>						
<i>Weak Gender ID</i> ( <i>Gender ID is not top 3</i> )	4214	-1122 (708) 0.114	-1325** (659) 0.046	3572	-963* (544) 0.078	-1084* (553) 0.051
<i>Strong Gender ID</i> ( <i>Gender ID is top 3</i> )	3210	417 (454) 0.359	266 (483) 0.582	3885	-56 (457) 0.902	-32 (458) 0.945

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.

appears wider than in the version where strong sectarians are only those women who identify their sectarian identity as most important. When we increase the threshold to any woman naming sectarian identity in their top three identities (out of a possible 7), then the size of the negative coefficient for contributions to the group pot increases among strong sectarian women, suggesting that this broader categorization of sectarian identification leads to results that appear more similar across genders. However, we still observe a key difference between men in women in terms of the link between sectarian identity and cooperation in mixed-sect groups, since weaker attachment to sectarian identity among women here shows a positive (though statistically insignificant) coefficient compared to the negative coefficient we observe for men (which is similar in magnitude to what we observe for weakly sectarian men in the main analysis). On the whole, we see little reason to suspect that our interpretation in



the main text is undermined by any of the findings here, using this alternative measure of sectarian identification.

In the case of the alternative measure of attachment to gender identity, we observe that the main finding of a negative effect of the mixed-sect treatment on cooperation among weakly identified women is even stronger when the measure is broadened to include anyone not indicating that gender identity is one of their top three most important social identities. We interpret this as further support for our interpretation of the main result that stronger attachment to gender identity can reduce the salience of norms of in-group favoritism in cooperation among women across ethnic lines. Somewhat surprisingly, we do observe a different result for men who weakly identify with their gender identity in this instance, since the coefficient for the mixed-sect group is significant and more than twice the size of what we observe in the main text. We do not attempt to interpret this result at length here, but we note that it is possible it is driven by risk aversion among those men who are less motivated by strong norms of masculinity in Lebanese society. Given that our main theoretical interest is in evaluating the role of attachment to gender identity for women in particular (using men as a comparison group for context), we are encouraged that the result for women does not seem particularly sensitive to the coding of the attachment measure.

### **C.3 SUBGROUP ANALYSIS CONDITIONAL ON PREJUDICE**

Relatedly, the literature on ethnic politics could suggest that an alternative mechanism to explain coethnic favoritism in cooperation is actually rooted in prejudice, or discomfort interacting with people from different ethnic backgrounds. Because our pre-treatment survey affords us with the opportunity to create an index of prejudice and therefore test this possibility, we do so here, though we do not consider this mechanism to be as closely aligned to our theory of in-group favoritism based on access to material and psychological benefits associated with in-group cooperation. The results are presented in Table 17. We find no evidence that prejudice against members of other sectarian groups affects cooperation in

mixed-sect relative to same-sect groups for either men or women.

Table 17: Results by level of prejudice.

	<b>Women's Groups Only (n = 285)</b>			<b>Men's Groups (n = 428)</b>		
	<i>Same Sect</i>	<i>Mixed Sect</i>		<i>Same Sect</i>	<i>Mixed Sect</i>	
	<i>Mean</i>	<i>(b/se/p)</i>		<i>Mean</i>	<i>(b/se/p)</i>	
		<i>Model 1</i>	<i>Model 2</i>		<i>Model 1</i>	<i>Model 2</i>
<b>Panel A: Prejudice Index (ATE)</b>						
<i>Low prejudice against other sects</i> <i>(below median for full sample)</i>	3612	-177 (588) 0.764	-185 (665) 0.782	4189	-429 (481) 0.374	-506 (491) 0.304
<i>High prejudice against other sects</i> <i>(above median for full sample)</i>	3376	106 (505) 0.834	-236 (567) 0.678	3311	-504 (504) 0.319	-447 (513) 0.386
<b>Panel B: Conditional marginal effect at both levels</b>						
<i>Low prejudice against other sects</i> <i>(below median for full sample)</i>	3612	-177 (587) 0.764	-127 (603) 0.833	4189	-429 (482) 0.374	-505 (490) 0.303
<i>High prejudice against other sects</i> <i>(above median for full sample)</i>	3376	106 (506) 0.834	-297 (521) 0.570	3311	-506 (491) 0.303	-477 (497) 0.337

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.

## APPENDIX D

### EXPERIMENTAL DESIGN

#### D.1 BACKGROUND ON THE PRE-REGISTERED DESIGN AND BROADER STUDY CONTEXT

In the much larger project, registered with the Evidence in Governance and Politics (EGAP) network<sup>1</sup>, we set out to investigate one main hypothesis: “Social interaction that cuts across ethnic (sectarian) and class cleavages will weaken individual tendencies towards ethnic politics and strengthen tendencies toward programmatic politics.” The ‘tendencies’ that we chose to focus on included a range of individual-level outcomes we anticipated might affect support for ethnic versus programmatic politics, including: perceptions of social identities, willingness to cooperate with individuals from similar (or different) social backgrounds, support for sectarian versus programmatic policies, and willingness to take political action.

To examine the effect of social interaction on our outcomes of interest, we designed a small-group, discussion-based experiment. The idea was to systematically vary the ethnic and class composition of these small discussion groups, lead participants through a discussion guide that did not vary across group sessions, and then measure our outcomes and mechanisms of interest using pre- and post-treatment surveys. The public goods game was designed as a supplemental behavioral measure that would allow us to measure preferences

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<sup>1</sup>[egap.org/registration/2208](https://egap.org/registration/2208)

for cooperation with group members prior to and immediately after the conclusion of the discussion. We anticipated that the difference between contributions in Round 1 compared to Round 2 across each of the four treatment types would tell us something important about the impact of social interaction on cooperation conditional on group composition (in terms of ethnic and class cleavages).

After implementation and data collection, we started to work with the public goods game data and were surprised to find very little variation at all across our treatment groups. This was a puzzling result given some of our other outcome measures, so we started to look into the descriptive data on patterns of contributions for specific treatment groups as well as for each round of play instead of focusing only on the difference between rounds. It immediately became clear that there were dramatic differences in the patterns of contribution behavior conditional on group gender. Since, by design, all of our groups consisted of either all-male or all-women participants, we were able to look at differential treatment effects on contribution behavior by gender. This led us to pursue existing literature to try and understand whether we should have anticipated this degree of variation along gender lines in the context of our ethnic and class group composition treatments. We quickly discovered that the empirical evidence of gender-based differences in cooperation is decidedly mixed. Moreover, we found that our design – employing natural socio-economic class and ethnic identities in the recruitment and random assignment protocol – is exceedingly rare and especially so given the scale of our experiment ( $N = 120$  groups).

This led us to revise our approach to analyzing the public goods game data.<sup>2</sup> We opted to write two additional papers that focus on the gender-specific elements of how class and ethnic group cleavages impact cooperation in group settings. In this paper, we focus specifically on the mixed-class versus same-class treatment. In another paper (the first paper in my dissertation portfolio), we focus on the mixed-ethnic versus same-ethnic group treatment. In both papers, we focus on contribution behavior only in Round 1 of the public goods game because we are primarily concerned with estimating the effect of the group composition

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<sup>2</sup>In general, we concur with those who argue that the purpose of the pre-analysis plan is not to tie researchers' hands and prevent any deviations that might become necessary during the natural course of research, but rather to encourage research transparency about those deviations and provide reasonable justification (Humphreys, de la Sierra and van der Windt, 2013; Monogan III, 2015; Olken, 2015).

treatment alone and in the absence of any additional effect that could have been induced by the discussion experience.

The Round 1 results are interesting in their own right because they reflect real-world decision-making in several important ways. First, since participants are strangers and have not interacted with one another in any significant way at that point, contributions to the Group Pot are a better measure of willingness to cooperate with others knowing only their ethnic and class background and shared gender identity. This increases the likelihood that contribution behavior is a reflection of willingness to cooperate given shared group membership and not some other factor. This is similar to mass mobilization efforts in many real-world settings where individuals may know very little about one another except that they share membership in some socially or politically salient group. It is on the basis of this shared group membership alone that they may choose to act in a variety of ways, including joining protests, marches, or demonstrations, donating to an organization that represents group members, or signing a petition because it is linked to shared group membership. In many of these interactions, individuals voluntarily choose to participate on the basis of an appeal to shared group identity, making contribution behavior in the context of this information alone a very interesting object of study.

Consequently, the bulk of the analysis in this paper is exploratory, taking advantage of our unique public goods game data to investigate some outstanding questions in the literature. In this section, we review some important features of the pre-registered research design through which the public goods game data was collected. This context is important for understanding the robustness checks we employ to validate our results, as well as some measures we take to address potential threats to inference that emerged from the way the randomization was implemented by our partners in the field.<sup>3</sup>

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<sup>3</sup>The remainder of the material in Appendix D (continued below) comes from the supplementary appendices to the following paper: Paler, Laura, Leslie Marshall, and Sami Atallah. 2018. “How Talking Across Ethnic and Class Divides Shapes Support for Ethnic Politics: Evidence from an Experiment in Lebanon.” *Working Paper*. [https://laurapaler.files.wordpress.com/2018/12/Leb\\_xcutting\\_MAIN.pdf](https://laurapaler.files.wordpress.com/2018/12/Leb_xcutting_MAIN.pdf). The complete Supplementary Appendix is available online at: [https://laurapaler.files.wordpress.com/2018/12/Leb\\_xcutting\\_APPEND.pdf](https://laurapaler.files.wordpress.com/2018/12/Leb_xcutting_APPEND.pdf).

## D.2 RECRUITMENT AND RANDOMIZATION

We organized 120 discussion groups in the Beirut and Mount Lebanon areas in the spring of 2016. Individuals with different sectarian (Christian, Sunni, and Shia) and economic (lower and upper income) profiles were randomly assigned to participate in either homogeneous or heterogeneous sectarian discussions and either homogeneous or heterogeneous class discussions. Assignment to the two treatments was orthogonal following a 2x2 factorial design with 30 groups in each cell. Specifically, participants were randomly assigned to one of four discussion group types: (1) homogeneous sect and class, (2) mixed sect, homogeneous class, (3) homogeneous sect, mixed class, and (4) mixed sect and class. Our main empirical focus in this paper is on identifying the average treatment effect of heterogeneous versus homogeneous class discussion.

The 120 discussion groups were organized in five blocks of 24 discussion sessions (6 sessions x 4 group types).<sup>4</sup> In homogeneous sectarian groups all six participants were either Christian, Sunni, or Shia. In mixed sectarian groups, two participants were Christian, two were Sunni, and two were Shia. In homogeneous class groups, all six participants were either lower or upper income. In mixed class groups, three participants were lower income and three were upper income. (We refer to this combination of attributes, e.g. poor Christian, as the ‘profile type’). To determine whether potential participants were rich or poor for the class randomization, eight questions about economic status were asked on the screening survey and these were used to create an index, discussed in detail in Section 3.3.4 as well as in Appendix F. Table 18 provides a summary of the randomization while Table 19 shows how class and sect combine for each of the 24 discussions in a set.

As described in the main text in Section 3.3.2, to obtain the correct group compositions, we recruited 1200 individuals of which 720 would ultimately participate and 480 would be ‘back-ups’. Upon arrival at their scheduled discussion session, participants were checked in by staff and informed consent was administered. Participants were not designated as ‘main’ or ‘backup’ in advance and if extra participants arrived, those that were asked to stay

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<sup>4</sup>A set of discussions was completed every 2-3 weeks between February and April 2016.

were randomly selected. This was essential to ensure that those who participated in each discussion were a random sample of those who were assigned to that treatment condition. There were some issues in how the scheduling was implemented that could raise concerns about non-comparability of the treatment and control groups. We describe the issue below.

Table 18: Summary of randomization.

		Sectarian discussion	
		Homog.	Hetero.
Class discussion	Homog.	<b>Group 1</b>	<b>Group 2</b>
		groups = 30 n = 180 Sect comp: 6 Sunni or 6 Christian or 6 Shia Class comp: All poor or all rich	groups = 30 n = 180 Sect comp: 2 Sunni, 2 Christian, and 2 Shia Class comp: All poor or all rich
	Hetero.	<b>Group 3</b>	<b>Group 4</b>
		groups = 30 n = 180 Sect comp: 6 Sunni or 6 Christian or 6 Shia Class comp: 3 poor and 3 rich	groups = 30 n = 180 Sect comp: 2 Sunni, 2 Christian, and 2 Shia Class comp: 1 poor and 1 rich of each sect

There were only a few instances in which discussions proceeded with fewer than six individuals or with individuals with different demographic profiles than anticipated. This includes seven instances in which groups proceeded with five rather than six individuals, either because an insufficient number showed up or because a participant left before the discussion was concluded. This affected three same/same groups, 2 mixed sect/same class groups, 1 same sect/mixed class group, and 1 mixed/mixed group. The effects of the imbalance are plausibly the greatest for the groups that are not homogeneous. To address concerns, we control for the number of discussion participants in each group, described in Appendix H. We also checked to make sure that we did not accidentally have individuals who knew each other in the same discussion session. While 41 individuals in 26 sessions reported that they knew at least one person in their discussion group prior to the session, only 15 of those 41 were women participants. Upon further investigation with the session organizers, we learned that these were mostly cases in which individuals had been transported together or met casually just before the session. We nonetheless control for the total number of people in the discussion that each participant reported knowing before the session (see Appendix H).

Table 19: Individual profiles by group type.

Group type 1: Same sect, same class						Group type 2: Mixed sect, same class					
1	2	3	4	5	6	7	8	9	10	11	12
P. Sun.	P. Shi.	P. Chr.	R. Sun.	R. Shi.	R. Chr.	P. Sun.	P. Sun.	P. Sun.	R. Sun.	R. Sun.	R. Sun.
P. Sun.	P. Shi.	P. Chr.	R. Sun.	R. Shi.	R. Chr.	P. Sun.	P. Sun.	P. Sun.	R. Sun.	R. Sun.	R. Sun.
P. Sun.	P. Shi.	P. Chr.	R. Sun.	R. Shi.	R. Chr.	P. Shi.	P. Shi.	P. Shi.	R. Shi.	R. Shi.	R. Shi.
P. Sun.	P. Shi.	P. Chr.	R. Sun.	R. Shi.	R. Chr.	P. Shi.	P. Shi.	P. Shi.	R. Shi.	R. Shi.	R. Shi.
P. Sun.	P. Shi.	P. Chr.	R. Sun.	R. Shi.	R. Chr.	P. Chr.	P. Chr.	P. Chr.	R. Chr.	R. Chr.	R. Chr.
P. Sun.	P. Shi.	P. Chr.	R. Sun.	R. Shi.	R. Chr.	P. Chr.	P. Chr.	P. Chr.	R. Chr.	R. Chr.	R. Chr.
Group type 3: Same sect, mixed class						Group type 4: Mixed sect, mixed class					
13	14	15	16	17	18	19	20	21	22	23	24
P. Sun.	P. Sun.	P. Shi.	P. Shi.	P. Chr.	P. Chr.	P. Sun.	P. Sun.	P. Sun.	P. Sun.	P. Sun.	P. Sun.
P. Sun.	P. Sun.	P. Shi.	P. Shi.	P. Chr.	P. Chr.	R. Sun.	R. Sun.	R. Sun.	R. Sun.	R. Sun.	R. Sun.
P. Sun.	P. Sun.	P. Shi.	P. Shi.	P. Chr.	P. Chr.	P. Shi.	P. Shi.	P. Shi.	P. Shi.	P. Shi.	P. Shi.
R. Sun.	R. Sun.	R. Shi.	R. Shi.	R. Chr.	R. Chr.	R. Shi.	R. Shi.	R. Shi.	R. Shi.	R. Shi.	R. Shi.
R. Sun.	R. Sun.	R. Shi.	R. Shi.	R. Chr.	R. Chr.	P. Chr.	P. Chr.	P. Chr.	P. Chr.	P. Chr.	P. Chr.
R. Sun.	R. Sun.	R. Shi.	R. Shi.	R. Chr.	R. Chr.	R. Chr.	R. Chr.	R. Chr.	R. Chr.	R. Chr.	R. Chr.

### D.3 POSSIBLE CONCERNS ABOUT SELECTION INTO PARTICIPATION

The way in which the randomization procedure was implemented raises two issues that need to be taken into consideration in obtaining unbiased estimates of treatment effects. The first has to do with possible selection effects in who participated in the discussions and the second with whether and how to weight the sample of participants to resemble the ‘population’ that was assigned. The first issue arises from the possibility that those who actually participated in each treatment are not a random sample of those who were assigned. As discussed in Section 3.3.3, the way in which individuals were scheduled to participate in the discussions gives some cause for concern that there was selection into participation in a way that could have introduced imbalances in pre-treatment characteristics for individuals in treatment and control groups.

Recall that we recruited a total of 1200 individuals in order to obtain 720 participants and 480 back-ups. To obtain the 1200, we recruited 40 individuals of each of the six profile types (e.g. poor Sunni, rich Sunni, poor Shia, rich Shia, poor Christian, rich Christian) for each of the five discussion blocks. We block randomized individuals by profile type and



discussion block with the goal of obtaining 24 participants and 16 extras for each discussion block. Panel A of Table 20 shows how the 40 individuals of each profile type were assigned and Panel B of Table 20 shows the target number of participants per treatment. The targets were set this way because we anticipated needing a different number of backups for each experimental condition.<sup>5</sup>

Implementing randomization in this way would still yield unbiased estimates of treatment effects as long as those who actually participated in the discussion were a random sample of the pool that was assigned. We worked with the implementing partner to design a procedure to try to ensure that this would be the case. First, the partner pre-screened all eligible participants for willingness to participate in a discussion on political and economic issues (without providing any information on the differing sectarian compositions of the groups). This resulted in a pool of potential discussion participants who were all willing to join in the activity. We asked our implementing partner to schedule the discussions such that every person in the pool would show up at one discussion in accordance with their treatment assignment, ensuring that we always had more individuals than necessary of each profile type at each session. The implementing partner was then supposed to randomly select (for each profile type) who would actually stay to participate and who would be asked to go home (after receiving compensation) or invited to a different session. In actuality, however, the partner typically ended up getting only the target number of participants to show up for each discussion, which introduces the possibility that there was some differential selection into who ended up participating.

To see why this is an issue, assume that there is some (unobserved) variable like *enthusiasm* that affects willingness to participate in a discussion.<sup>6</sup> Assume also that treatment assignment achieved balance in this variable across the four experimental conditions. For

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<sup>5</sup>Specifically, we planned to over-recruit by 50 percent. For example, for poor Sunnis in homogeneous groups there was one discussion and we needed six participants and 3 backups ( $6 \times 1 + 3 \times 1 = 9$ ). The mixed sect, same class treatment required two poor Sunnis for three discussions and one backup for each discussion ( $2 \times 3 + 1 \times 3 = 9$ ). The same sect, mixed class treatment required three poor Sunnis for two discussions and two backups for each discussion ( $3 \times 2 + 2 \times 2 = 10$ ). And the fully mixed treatment required one poor Sunni for six discussions plus one backup for each discussion ( $1 \times 6 + 1 \times 6 = 12$ ).

<sup>6</sup>Even though we pre-screened for enthusiasm, we can think of there being very and moderately enthusiastic individuals.

illustrative purposes, we assume that 50 percent of all assigned individuals are *very* enthusiastic and the rest were only moderately enthusiastic. Panel C of Table 20 shows the proportion of individuals assigned who were very enthusiastic and we can see that this is balanced across the four experimental conditions. Assume then that all very enthusiastic individuals were the easiest to schedule and were therefore more likely to participate (regardless of their treatment assignment, which they did not know before arrival). Panel D of Table 20 shows how, if this were the case, the enthusiasm proportion would now be imbalanced across the treatment conditions among those who actually participated. We emphasize that this issue is not related to the treatment assignment itself but rather to the fact that we assigned a varying number of individuals in each experimental condition in order to reach our target of six participants of each profile.

Table 20: Illustration of potential selection into participation.

		Mixed sectarian				Mixed sectarian	
		<i>N</i>	<i>Y</i>			<i>N</i>	<i>Y</i>
Mixed class	<i>N</i>	9	9	Mixed class	<i>N</i>	6	6
	<i>Y</i>	10	12		<i>Y</i>	6	6
Panel A: Treatment assignment ( $n = 40$ )				Panel B: Target participated ( $n = 24$ )			
		Mixed sectarian				Mixed sectarian	
		<i>N</i>	<i>Y</i>			<i>N</i>	<i>Y</i>
Mixed class	<i>N</i>	4.5/9 = .50	4.5/9 = .50	Mixed class	<i>N</i>	4.5/6 = .75	4.5/6 = .75
	<i>Y</i>	5/10 = .50	6/12 = .50		<i>Y</i>	5/6 = .83	6/6 = 1
Panel C: Proportion of those assigned who are ‘very enthusiastic’				Panel D: Proportion of those who participated who are ‘very enthusiastic’			

*So, how concerned should we be?* After we discovered this, we discussed extensively with our partner and it seems that in most cases attendance was driven by idiosyncratic scheduling factors rather than systematic differences. Moreover, for this to be a problem, there would have to be not only non-trivial differential participation but also that this disparity would have to have non-trivial impacts on the outcomes. While we think this unlikely, some might find this only somewhat reassuring. We are further reassured by the fact that the checks in Appendix E suggest balance on a large number of pre-treatment covariates between treatment and control. We also include covariates in all analysis to address concerns.

## D.4 TREATMENT ASSIGNMENT PROBABILITIES

The second main concern has to do with whether and how to weight the data to correct for unequal treatment assignment probabilities given that we intentionally recruited and assigned at different rates depending on the profiles we needed for each group session. Our main analysis employs inverse probability weights to correct for unequal treatment assignment probabilities. We use two different weights, one in the main analysis and one as a robustness check in Appendix H. We also consider whether weighting might magnify the selection effects described above.

The description of our randomization above suggests that we block randomly assigned participants based on profile and set using the same probabilities in each block ( $\frac{9}{40}$ ,  $\frac{9}{40}$ ,  $\frac{10}{40}$ , and  $\frac{12}{40}$ ). In practice, we stratified treatment assignment not only on set and profile type but, where possible, we created even smaller strata using additional information on recruiter and participant neighborhood and randomly assigned individuals using proportional probability assignment within these small strata.<sup>7</sup> We used these small strata to minimize the chances that discussion participants would know each other, which was more likely if they came from the same neighborhood and/or same recruiter network. In going from our pool of 40 of each type to our 24 participants, we lose observations in small strata cells, resulting in a large number of empty cells. Panel A of 21 provides an illustration of this, showing the number of participants as assigned in small strata (left) and the number of participants that actually took part in the discussions (right).

We address this issue through post-stratification where we collapse the strata until we have no empty cells and then create new weights so that those who participated are weighted up to reflect the pool of potential participants originally assigned. We create two versions of weights based on two ways of collapsing the strata. First we created new ‘smaller’ strata where we collapsed cells such that we had no empty cells but where we retained information on recruiter or neighborhood were possible. Panel B in Table 21 provides an example of how this was done. We then construct probability weights to weight individuals who participated

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<sup>7</sup>We used proportional probability assignment because of the unequal number of backups for each group type.

up to reflect the ‘population’ as assigned. Second, we create ‘bigger’ strata where we collapse such that strata are formed by profile and set only, as in Panel C. We again create weights to weight those who participated up to the population of those assigned.

Our main analysis uses weighted least squared regression employing the weights created for the smaller strata. In Appendix H we check the robustness of results to several additional specifications, including estimates of treatment effects on the sample, estimates using the weights for bigger strata, and estimates with block fixed effects using smaller and bigger strata.

Table 21: Example of post-stratification.

<b>Panel A:</b> Example of treatment assignment and participation in small strata				
	Assigned (n=40)		Participated (n=24)	
Small strata 1	1	1	1	0
	1	1	0	1
Small strata 2	1	1	0	0
	1	2	0	1
Small strata 3	1	1	1	1
	2	2	1	1
Small strata 4	2	2	2	2
	2	2	2	1
Small strata 5	2	2	0	2
	2	2	1	2
Small strata 6	2	2	2	1
	2	3	2	0
<b>Panel B:</b> Example of treatment assignment and participation in ‘smaller’ strata after collapsing strata				
	Assigned (n=40)		Participated (n=24)	
New small strata	6	6	3	3
(collapsed 1, 2, 5, 6)	6	8	3	4
Small strata 3	1	1	1	1
	2	2	1	1
Small strata 4	2	2	2	2
	2	2	2	1
<b>Panel C:</b> Example of treatment assignment and participation in ‘bigger’ strata				
	Assigned (n=40)		Participated (n=24)	
‘Big’ strata	9	9	6	6
	10	12	6	6

## D.5 A NOTE ON DATA PREPARATION

Section 6.4 of the original pre-analysis plan for the larger project provides details on our plans for cleaning and preparing the data, much of which is relevant here. We pre-specify that we will perform 10 rounds of missing data imputation using multivariate imputation via chained equations and recode variables for directionality. We also pre-specify that we will use inverse covariance weighting to create indices using variables that are intended to measure the same construct (and are pre-registered as such). We also specify the variables that we will use for controls and for control indices.

## APPENDIX E

### BALANCE CHECKS

The screening and pre-treatment surveys contain a large number of pre-treatment covariates that can be used to check balance. Table 22 shows the results of the balance test for our women’s sample using 55 pre-treatment covariates. We also present the balance test for our men’s sample (Table 23) and for the full sample of men and women overall (Table 24) to confirm that the randomization was equally effective across the relevant gender groups. While we check balance using the individual covariates, we also use inverse covariance weighting to create pre-specified indices for measures that capture a common underlying concept, as described in Section 3.4.2 of the main text. In all three balance tables, we present results of the balance tests for the individual covariates as well as for the indices but note that if there is an imbalance in an index component there is likely to be imbalance in the index itself. We test for balance by running our main estimation equation specified in Section 3.4.2 of the main paper. Specifically, we run a weighted least squares regression of each covariate on the treatment assignment indicator (excluding other covariates), where weights account for unequal treatment assignment probabilities in ‘smaller’ strata (see Appendix D).

The balance test for women shown in Table 22 reveals that only 6 out of 55 covariates are significant at the 95 percent confidence level, which is about what we would expect to happen by chance. Also as expected, the coefficients are close to zero for most covariates. These results help to address concerns about the integrity of the randomization described in Appendix D. In our main analysis we nevertheless control for indices and individual variables

to address further concerns, with the exception of excluding the final 5 variables presented in the balance table (‘people in the group known prior to the session’ and ‘answered all practice problem questions correctly’). Since payoff comprehension was measured after exposure to the group composition treatment (same- versus mixed-class), we instead use this measure as a robustness check in Appendix H. Likewise, we check the robustness of our main results to the inclusion of the variable representing ‘people in the group known prior to the session’ in Appendix H.

We present the balance tests for the men’s groups as well as the full sample for completeness. The balance test for men shown in Table 23 reveals that only 1 out of 55 covariates are significant at the 95 percent confidence level, which is well within what we would expect to see by chance. Also as expected, the coefficients are close to zero for most covariates. Similarly, the balance test for the full sample shown in Table 24 demonstrates that only 2 out of 55 covariates are significant at the 95 percent confidence level, also well within what we would expect to observe by chance. The vast majority of the coefficients are close to zero as well. Taken together, these additional balance tests lend support to our contention that the randomization procedure was largely effective in ensuring that unobservable (and observable) characteristics are likely to be evenly distributed across our treatment (mixed-class) and control (same-class) groups.

Table 22: Balance check for women's sample only.

	Mixed Class		
	Control mean (Same Class)	b	p-value
Age	36	1	0.625
Married (%)	0.72	0.01	0.842
Post-secondary education (%)	0.61	0.01	0.857
Christian (%)	0.33	0.00	1.000
Shia (%)	0.33	0.00	0.956
Sunni (%)	0.33	0.00	0.957
Economic status index	-0.06	-0.05	0.663
Value of total household assets (screening)	1.61	0.01	0.931
Estimated area (size) of household (screening)	1.75	-0.06	0.472
Owns a summer house (screening)	2.04	-0.02	0.859
Power alternatives during an outage (screening)	2.46	0.05	0.655
Can afford to vacation at least once per year (screening)	1.83	-0.01	0.893
Frequency of dining out per month (screening)	2.08	-0.04	0.687
Monthly household net income (screening)	6.66	-0.05	0.801
Subjective monthly household income (screening)	3.27	-0.02	0.913
Total net monthly household income (pre-treatment)	6.20	-0.26	0.241
Self-identified economic class (pre-treatment)	1.05	-0.02	0.827
Students (%)	0.11	0.01	0.839
Homemakers (%)	0.54	0.06	0.313
Prejudice against members of other sects index	0.08	0.14	0.262
Marrying someone from another sect (discomfort coded high)	2.55	-0.06	0.686
Having a physician from another sect (discomfort coded high)	1.31	0.10	0.235
Being neighbors with someone from another sect (discomfort coded high)	1.50	0.04	0.636
Discussing politics with someone from another sect (discomfort coded high)	2.11	0.15	0.272
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.67	0.05	0.630
Being supervised at work by someone from another sect (discomfort coded high)	1.53	0.22	0.025
Being friends with someone from another sect (discomfort coded high)	1.31	0.06	0.432
Political activity/engagement index	-0.10	-0.15	0.184
Discussed issues with family, friends, or neighbors	0.73	-0.13	0.032
Talked to party members/Zaim/MPs about political issues	0.14	-0.07	0.083
Signed a petition	0.02	0.03	0.177
Attended a demonstration/protest march	0.27	-0.01	0.862
Homogeneity of social networks (sect and class) index	0.09	0.08	0.547
Family, friends, acquaintances in other economic classes (none coded high)	2.96	-0.08	0.488
Family, friends, acquaintances in other sects (none coded high)	2.69	0.23	0.114
How often you discuss when you disagree	2.38	-0.07	0.463
Strength of sectarian identity index	0.23	-0.29	0.016
Willingness to change official sectarian affiliation (unwilling coded high)	3.62	-0.21	0.030
Political party (1=supports a sectarian party)	0.56	-0.17	0.007
Relative strength of sectarian identity (strong coded high)	4.36	0.10	0.688
Connectedness to sectarian leaders for access to benefits index	-0.13	-0.12	0.306
Access to benefits through Zaim/politician	1.77	-0.15	0.161
Access to benefits through a religious leaders	2.00	-0.05	0.666
Strength of age group identity (strong coded high)	4.31	0.36	0.142
Strength of gender identity (strong coded high)	5.36	0.05	0.854
Strength of class identity (strong coded high)	3.73	0.11	0.648
Strength of Lebanese identity (strong coded high)	5.47	0.02	0.947
Strength of occupational identity (strong coded high)	4.15	0.21	0.401
Binary indicator for Moderator	0.37	0.04	0.456
Number of participants in session	0.92	0.04	0.122
People in the group known prior to the session	0.02	0.08	0.015
Answered all practice problem questions correctly (%)	0.86	0.03	0.454
Correctly answered amount earned from Group Pot (%)	0.99	-0.01	0.519
Correctly answered Group Pot share (%)	0.93	0.01	0.851
Correctly answered total earned (%)	0.93	0.02	0.598

Notes: P-values are from a two-tailed test. Robust standard errors in parentheses. N=285.



Table 23: Balance check for men's sample only.

	Mixed Class		
	Control mean (Same Class)	b	p-value
Age	28	0	0.696
Married (%)	0.34	0.05	0.296
Post-secondary education (%)	0.72	-0.03	0.568
Christian (%)	0.34	0.00	0.923
Shia (%)	0.33	0.00	0.922
Sunni (%)	0.33	0.00	1.000
Economic status index	0.02	0.05	0.661
Value of total household assets (screening)	1.68	-0.04	0.577
Estimated area (size) of household (screening)	1.72	-0.02	0.737
Owns a summer house (screening)	2.01	0.05	0.602
Power alternatives during an outage (screening)	2.55	0.10	0.315
Can afford to vacation at least once per year (screening)	1.93	-0.05	0.586
Frequency of dining out per month (screening)	2.13	0.03	0.652
Monthly household net income (screening)	6.77	0.04	0.756
Subjective monthly household income (screening)	3.29	0.04	0.760
Total net monthly household income (pre-treatment)	6.32	0.10	0.611
Self-identified economic class (pre-treatment)	0.99	0.07	0.357
Students (%)	0.16	-0.01	0.734
Homemakers (%)	0.00	0.01	0.180
Prejudice against members of other sects index	-0.13	0.04	0.662
Marrying someone from another sect (discomfort coded high)	2.08	0.01	0.923
Having a physician from another sect (discomfort coded high)	1.28	0.09	0.160
Being neighbors with someone from another sect (discomfort coded high)	1.51	0.02	0.830
Discussing politics with someone from another sect (discomfort coded high)	1.92	0.02	0.864
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.55	0.04	0.602
Being supervised at work by someone from another sect (discomfort coded high)	1.69	-0.02	0.811
Being friends with someone from another sect (discomfort coded high)	1.36	-0.01	0.836
Political activity/engagement index	0.06	0.14	0.196
Discussed issues with family, friends, or neighbors	0.72	0.04	0.369
Talked to party members/Zaim/MPs about political issues	0.13	0.02	0.627
Signed a petition	0.07	0.02	0.497
Attended a demonstration/protest march	0.40	0.07	0.208
Homogeneity of social networks (sect and class) index	-0.03	-0.10	0.273
Family, friends, acquaintances in other economic classes (none coded high)	2.85	-0.09	0.351
Family, friends, acquaintances in other sects (none coded high)	2.60	-0.07	0.456
How often you discuss when you disagree	2.33	-0.06	0.495
Strength of sectarian identity index	-0.07	0.01	0.920
Willingness to change official sectarian affiliation (unwilling coded high)	3.40	-0.11	0.213
Political party (1=supports a sectarian party)	0.46	0.01	0.778
Relative strength of sectarian identity (strong coded high)	4.08	0.27	0.208
Connectedness to sectarian leaders for access to benefits index	0.08	0.06	0.552
Access to benefits through Zaim/politician	1.92	0.15	0.163
Access to benefits through a religious leaders	2.22	-0.04	0.740
Strength of age group identity (strong coded high)	4.51	0.12	0.555
Strength of gender identity (strong coded high)	4.79	0.19	0.357
Strength of class identity (strong coded high)	3.92	0.01	0.976
Strength of Lebanese identity (strong coded high)	5.87	-0.38	0.054
Strength of occupational identity (strong coded high)	4.83	0.11	0.545
Binary indicator for Moderator	0.37	0.06	0.219
Number of participants in session	0.92	0.06	0.018
People in the group known prior to the session	0.12	-0.03	0.618
Answered all practice problem questions correctly (%)	0.82	-0.01	0.872
Correctly answered amount earned from Group Pot (%)	0.98	-0.03	0.126
Correctly answered Group Pot share (%)	0.89	0.01	0.621
Correctly answered total earned (%)	0.90	0.01	0.647

Notes: P-values are from a two-tailed test. Robust standard errors in parentheses. N=428.

Table 24: Balance check for the full sample (includes men and women).

	Mixed Class		
	Control mean (Same Class)	b	p-value
Age	31	0	0.561
Married (%)	0.49	0.03	0.372
Post-secondary education (%)	0.68	-0.01	0.756
Christian (%)	0.34	0.00	0.940
Shia (%)	0.33	0.00	0.912
Sunni (%)	0.33	0.00	0.972
Economic status index	-0.01	0.01	0.914
Value of total household assets (screening)	1.65	-0.02	0.689
Estimated area (size) of household (screening)	1.73	-0.04	0.484
Owns a summer house (screening)	2.03	0.02	0.772
Power alternatives during an outage (screening)	2.51	0.08	0.283
Can afford to vacation at least once per year (screening)	1.89	-0.03	0.611
Frequency of dining out per month (screening)	2.11	0.01	0.914
Monthly household net income (screening)	6.73	0.01	0.950
Subjective monthly household income (screening)	3.28	0.02	0.861
Total net monthly household income (pre-treatment)	6.27	-0.05	0.745
Self-identified economic class (pre-treatment)	1.01	0.03	0.537
Students (%)	0.14	0.00	0.868
Homemakers (%)	0.21	0.03	0.375
Prejudice against members of other sects index	-0.04	0.08	0.300
Marrying someone from another sect (discomfort coded high)	2.26	-0.02	0.837
Having a physician from another sect (discomfort coded high)	1.29	0.09	0.068
Being neighbors with someone from another sect (discomfort coded high)	1.51	0.03	0.649
Discussing politics with someone from another sect (discomfort coded high)	1.99	0.07	0.387
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.60	0.05	0.482
Being supervised at work by someone from another sect (discomfort coded high)	1.62	0.08	0.241
Being friends with someone from another sect (discomfort coded high)	1.34	0.02	0.737
Political activity/engagement index	0.00	0.02	0.779
Discussed issues with family, friends, or neighbors	0.72	-0.03	0.458
Talked to party members/Zaim/MPs about political issues	0.13	-0.02	0.524
Signed a petition	0.05	0.02	0.219
Attended a demonstration/protest march	0.35	0.04	0.362
Homogeneity of social networks (sect and class) index	0.02	-0.03	0.684
Family, friends, acquaintances in other economic classes (none coded high)	2.90	-0.09	0.244
Family, friends, acquaintances in other sects (none coded high)	2.64	0.05	0.586
How often you discuss when you disagree	2.35	-0.06	0.319
Strength of sectarian identity index	0.05	-0.11	0.176
Willingness to change official sectarian affiliation (unwilling coded high)	3.49	-0.15	0.023
Political party (1=supports a sectarian party)	0.50	-0.06	0.142
Relative strength of sectarian identity (strong coded high)	4.19	0.20	0.214
Connectedness to sectarian leaders for access to benefits index	0.00	-0.01	0.926
Access to benefits through Zaim/politician	1.86	0.03	0.723
Access to benefits through a religious leaders	2.13	-0.04	0.611
Strength of age group identity (strong coded high)	4.43	0.21	0.151
Strength of gender identity (strong coded high)	5.02	0.13	0.421
Strength of class identity (strong coded high)	3.85	0.05	0.757
Strength of Lebanese identity (strong coded high)	5.71	-0.22	0.147
Strength of occupational identity (strong coded high)	4.56	0.15	0.323
Binary indicator for Moderator	0.37	0.05	0.153
Number of participants in session	0.92	0.05	0.005
People in the group known prior to the session	0.08	0.02	0.612
Answered all practice problem questions correctly (%)	0.84	0.01	0.784
Correctly answered amount earned from Group Pot (%)	0.98	-0.02	0.100
Correctly answered Group Pot share (%)	0.91	0.01	0.606
Correctly answered total earned (%)	0.91	0.01	0.501

Notes: P-values are from a two-tailed test. Robust standard errors in parentheses. N=713.

## **APPENDIX F**

### **SCREENING SURVEY**

Table 25: Screening survey questions and index creation.

Screening Survey Questions Included in Economic Status Index			
Question No.	Question Text	Answer Options	Scoring for Index (1-3)
1	When you think of the total number of your household acquisitions (houses, lands, cars, mobile phones, computers and laptops, household appliances, valuable furniture/decoration items, jewelry, etc.) what is, roughly, their estimated total value?	0 - 250,000 USD 250,001 - 500,000 USD 500,001+ USD Don't know/Refuse/NA	1 2 3 0
2	What is the estimated area of your main place of residency?	Less than 150m2 150 to 250m2 More than 250m2 Don't know/Refuse/NA	1 2 3 0
3	Do you own a summer house? (Including chalets in seaside resorts)	No It happens that we rent a place for summer but not consistently Yes Don't know/Refuse/NA	1 2 3 0
4	When faced with power shortage, what alternatives do you resort to?	Nothing, we don't have money to buy power We buy power from a private generator 5 A We buy power from a private generator 10 A We buy power from a private generator 15 A+ We own a private generator Don't know/Refuse/NA	1 1 2 3 3 0
5	In general, can you afford to travel on a leisure trip with your family at least once a year?	No we can't afford it Yes, but only to cheaper destinations, or on tour offers Yes, we can go wherever we want Don't know/Refuse/NA	1 2 3 0
6	In a typical month, how often can you afford to go with your family for lunch or dinner to restaurants (for bills totaling at least 100 USD)?	0 1 to 2 3+ Don't know/Refuse/NA	1 2 3 0
7	What is your family's net monthly income? (Shown here in US Dollars but both options were provided in the original questionnaire.)	0 1 - 120 121 - 333 334 - 667 668 - 1,333 1,334 - 2,667 2,668 - 4,000 4,001 - 5,333 5,334 - 7,333 7,334 - 9,333 9,334 - 12,667 12,668 - 16,667 16,668 - 26,667 26,668 - 53,333 53,334 or more Don't know/Refuse	1 1 1 1 1 1 2 2 3 3 3 3 3 3 3 3 3 0
8	Which of the following is the best description of your family's monthly income?	The family income does not cover our needs and we face major problems making ends meet The family income barely covers our needs and we sometimes face problems making ends meet The family income covers our needs but we cannot afford luxury items or any extra leisure activities The family income covers our needs without us facing any major difficulties The family income very well covers our needs and we can also save some of it. Don't know/Refuse/NA	1 1 2 3 3 0
<b>Creating the Index:</b>			
The minimum score is 8 (1 point on each question above)		Score between 8 and 13 = lower income individuals	
The maximum score is 24 (3 points on each question above)		Score between 14 and 18 = middle class individuals disregarded	
Scores below 8 means that at least one question was not responded to.		Score between 19 and 24 = upper middle class individuals	
If more than two questions are not responded to, the screener is disregarded.			
If 1 or 2 questions are not responded to, the following scoring applies:		Score between 6 and 9 = lower income individuals	
		Score between 10 and 13 = middle class individuals disregarded	
		Score between 14 and 18 = upper middle class individuals	

## APPENDIX G

### SUMMARY STATISTICS

#### G.1 OVERVIEW OF THE DATA

Table 26: Summary statistics: women only, men only, and the full sample.

Variable Description	Female Subsample (n=285)				Male Subsample (n=428)				Full Sample (n=713)			
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
Age	36	11	19	60	29	8	18	65	32	10	18	65
Married (%)	0.72	0.45	0	1	0.36	0.48	0	1	0.50	0.50	0	1
Post-secondary education (%)	0.61	0.49	0	1	0.71	0.45	0	1	0.67	0.47	0	1
Christian (%)	0.33	0.47	0	1	0.33	0.47	0	1	0.33	0.47	0	1
Shia (%)	0.34	0.47	0	1	0.33	0.47	0	1	0.34	0.47	0	1
Sunni (%)	0.33	0.47	0	1	0.34	0.47	0	1	0.33	0.47	0	1
Economic status index	-0.08	0.90	-2.07	2.31	0.05	1.06	-2.23	2.32	0.00	1.00	-2.23	2.32
Value of total household assets	1.63	0.73	1	3	1.66	0.79	1	3	1.65	0.77	1	3
Estimated area (size) of household	1.73	0.68	1	3	1.71	0.75	1	3	1.72	0.72	1	3
Owns a summer house	2.04	0.98	1	3	2.04	0.97	1	3	2.04	0.97	1	3
Power alternatives during an outage	2.48	0.86	1	5	2.60	1.00	1	5	2.55	0.95	1	5
Can afford to vacation at least once per year	1.82	0.84	1	3	1.90	0.85	1	3	1.87	0.84	1	3
Frequency of dining out per month	2.06	0.72	1	3	2.15	0.74	1	3	2.11	0.73	1	3
Monthly household net income	6.64	1.58	1	10	6.79	1.45	1	10	6.73	1.50	1	10
Subjective monthly household income	3.27	1.27	1	5	3.31	1.34	1	5	3.29	1.31	1	5
Total net monthly household income	6.05	1.75	1	11	6.37	1.86	1	12	6.24	1.82	1	12
Self-identified economic class	1.06	0.66	0	2	1.03	0.72	0	2	1.04	0.70	0	2
Students (%)	0.12	0.32	0	1	0.15	0.35	0	1	0.13	0.34	0	1
Homemakers (%)	0.56	0.50	0	1	0.00	0.07	0	1	0.23	0.42	0	1
Prejudice against members of other sects index	0.15	0.97	-1.30	4.17	-0.10	1.01	-1.30	4.17	-0.00	1.00	-1.30	4.17
Marrying someone from another sect (discomfort coded high)	2.52	1.09	1	4	2.08	1.00	1	4	2.26	1.06	1	4
Having a physician from another sect (discomfort coded high)	1.36	0.65	1	4	1.32	0.60	1	4	1.33	0.62	1	4
Being neighbors with someone from another sect (discomfort coded high)	1.51	0.71	1	4	1.52	0.75	1	4	1.52	0.73	1	4
Discussing politics with someone from another sect (discomfort coded high)	2.18	1.11	1	4	1.95	1.04	1	4	2.05	1.07	1	4
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.69	0.85	1	4	1.57	0.80	1	4	1.62	0.82	1	4
Being supervised at work by someone from another sect (discomfort coded high)	1.65	0.79	1	4	1.67	0.87	1	4	1.66	0.84	1	4
Being friends with someone from another sect (discomfort coded high)	1.34	0.64	1	4	1.35	0.64	1	4	1.35	0.64	1	4
Political activity/engagement index	-0.17	0.93	-1.24	3.46	0.11	1.03	-1.24	3.46	0.00	1.00	-1.24	3.46
Discussed issues with family, friends, or neighbors	0.67	0.47	0	1	0.73	0.44	0	1	0.71	0.46	0	1
Talked to party members/Zaim/MPs about political issues	0.10	0.30	0	1	0.14	0.34	0	1	0.12	0.33	0	1
Signed a petition	0.04	0.19	0	1	0.08	0.27	0	1	0.06	0.24	0	1
Attended a demonstration/protest march	0.27	0.44	0	1	0.41	0.49	0	1	0.36	0.48	0	1
Homogeneity of social networks (sect and class) index	0.11	1.05	-2.18	2.79	-0.07	0.96	-2.18	2.79	-0.00	1.00	-2.18	2.79
Family, friends, acquaintances in other economic classes (none coded high)	2.91	0.98	1	5	2.81	0.96	1	5	2.85	0.97	1	5
Family, friends, acquaintances in other sects (none coded high)	2.78	1.17	1	5	2.58	1.02	1	5	2.66	1.09	1	5
How often discuss when you disagree	2.36	0.82	1	4	2.30	0.79	1	4	2.33	0.80	1	4
Strength of sectarian identity index	0.10	0.97	-2.78	1.57	-0.07	1.01	-2.78	1.57	0.00	1.00	-2.78	1.57
Willingness to change official sectarian affiliation (unwilling coded high)	3.52	0.77	1	4	3.34	0.86	1	4	3.41	0.83	1	4
Political party (1=supports a sectarian party)	0.48	0.50	0	1	0.47	0.50	0	1	0.47	0.50	0	1
Relative strength of sectarian identity (strong coded high)	4.43	2.02	1	7	4.23	2.14	1	7	4.31	2.10	1	7
Connectedness to sectarian leaders for access to benefits index	-0.17	0.93	-1.15	2.35	0.11	1.03	-1.15	2.35	-0.00	1.00	-1.15	2.35
Access to benefits through Zaim/politician	1.71	0.88	1	4	2.01	1.03	1	4	1.89	0.99	1	4
Access to benefits through a religious leaders	1.99	0.97	1	4	2.19	1.01	1	4	2.11	1.00	1	4
Strength of age group identity (strong coded high)	4.47	1.94	1	7	4.62	1.84	1	7	4.56	1.88	1	7
Strength of gender identity (strong coded high)	5.39	1.87	1	7	4.91	1.92	1	7	5.11	1.92	1	7
Strength of class identity (strong coded high)	3.77	1.86	1	7	3.91	1.82	1	7	3.85	1.83	1	7
Strength of Lebanese identity (strong coded high)	5.48	1.88	1	7	5.69	1.78	1	7	5.60	1.82	1	7
Strength of occupational identity (strong coded high)	4.25	1.90	1	7	4.83	1.79	1	7	4.60	1.86	1	7
Binary indicator for Moderator	0.40	0.49	0	1	0.39	0.49	0	1	0.39	0.49	0	1
Number of participants in session	0.95	0.22	0	1	0.95	0.21	0	1	0.95	0.22	0	1
People in the group known prior to the session	0.06	0.29	0	3	0.11	0.52	0	5	0.09	0.44	0	5
Answered all practice problem questions correctly (%)	0.87	0.34	0	1	0.82	0.38	0	1	0.84	0.37	0	1
Correctly answered amount earned from Group Pot (%)	0.98	0.14	0	1	0.97	0.18	0	1	0.97	0.17	0	1
Correctly answered Group Pot share (%)	0.93	0.26	0	1	0.90	0.30	0	1	0.91	0.29	0	1
Correctly answered total earned (%)	0.93	0.25	0	1	0.92	0.28	0	1	0.92	0.27	0	1

## G.2 CLASS-BASED DIFFERENCES IN PRE-TREATMENT COVARIATES FOR WOMEN

In line with what we would expect based on the literature, there are some important differences between the women in our sample by socio-economic class background. Table 27 presents a formal test of the difference between rich and poor women in our sample on 52 pre-treatment covariates. On the whole, we do not observe many significant differences between women in our sample on the basis of socio-economic class background. However, those differences we do observe in terms of pre-treatment covariates are telling and generally supportive of our results in the main text.

The data presented in Panel B shows that our socio-economic class categorization of women was effective, as rich and poor women significantly differ on all relevant measures of socio-economic status used in our class index for classification and random assignment to treatment groups. As could be expected, more rich women have completed post-secondary education than poor women; nearly all rich women in our sample have a post-secondary degree of some sort, while less than one-third of poor women do. This might help explain why there is a positive and significant (7 percentage point) difference in the share of rich women (relative to poor women) who answered all practice problem questions correctly in the public goods game example worksheet.

In line with what we might expect given the literature characterizing upper-class women as elitist or benefiting from their privileged status, we also see evidence that the rich women in our sample are significantly more likely than poor women to report having access to Za'im or politicians for access to benefits (see Panel F). Rich women also report a significantly higher strength of attachment to their class identity. This could be owing to psychological benefits attached to their privileged class status (Brewer, 1991). It is worth noting that the vast majority of poor women in our sample are occupied as homemakers (67%). This is about 20 percentage points higher than the share of rich women engaged as homemakers (46%), which could also help explain why we see that rich women in our sample are more likely to report discussing political issues with family, friends, or neighbors since they may

be more active outside of the home in the labor force or engaging in political activities.

Table 27: Testing for statistically significant differences between rich and poor women on pre-treatment covariates.

	Poor Women Mean	Rich Women Mean	Test of the Difference <i>b</i>	<i>p</i> -value
<b>Panel A: Demographics</b>				
Age	38	34	-4	0.005
Married (%)	0.75	0.7	-0.04	0.443
Post-secondary education (%)	0.27	0.94	0.67	0.000
Christian (%)	0.32	0.34	0.00	0.962
Shia (%)	0.34	0.34	0.01	0.825
Sunni (%)	0.34	0.32	-0.02	0.789
<b>Panel B: Economic class status</b>				
Economic status index	-0.82	0.66	1.48	0.000
Value of total household assets	1.04	2.22	1.14	0.000
Estimated area (size) of household	1.2	2.25	1.05	0.000
Owens a summer house	1.1	2.97	1.88	0.000
Power alternatives during an outage	1.82	3.13	1.34	0.000
Can afford to vacation at least once per year	1.09	2.55	1.47	0.000
Frequency of dining out per month	1.54	2.57	1.02	0.000
Monthly household net income	5.39	7.87	2.49	0.000
Subjective monthly household income	2.09	4.45	2.36	0.000
Total net monthly household income	4.84	7.24	2.47	0.000
Household's economic class	0.68	1.43	0.73	0.000
Students (%)	0.15	0.08	-0.08	0.022
Homemakers (%)	0.67	0.46	-0.20	0.001
<b>Panel C: Prejudice</b>				
Prejudice against members of other sects index	0.15	0.15	-0.01	0.949
Marrying someone from another sect (discomfort coded high)	2.51	2.53	-0.02	0.891
Having a physician from another sect (discomfort coded high)	1.36	1.36	0.00	0.958
Being neighbors with someone from another sect (discomfort coded high)	1.53	1.5	-0.05	0.606
Discussing politics with someone from another sect (discomfort coded high)	2.2	2.16	0.00	0.980
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.71	1.67	-0.03	0.768
Being supervised at work by someone from another sect (discomfort coded high)	1.59	1.72	0.10	0.300
Being friends with someone from another sect (discomfort coded high)	1.36	1.33	-0.03	0.718
<b>Panel D: Political Activity</b>				
Political activity/engagement index	-0.27	-0.07	0.20	0.096
Discussed issues with family, friends, or neighbors	0.62	0.72	0.10	0.084
Talked to party members/Zaim/MPs about political issues	0.08	0.12	0.04	0.302
Signed a petition	0.03	0.04	0.01	0.557
Attended a demonstration/protest march	0.25	0.29	0.03	0.565
<b>Panel E: Social Networks</b>				
Homogeneity of social networks (sect and class) index	0.1	0.11	0.04	0.767
Family, friends, acquaintances in other economic classes (none coded high)	2.88	2.95	0.08	0.518
Family, friends, acquaintances in other sects (none coded high)	2.81	2.75	-0.02	0.883
Frequency discussing issues with people you disagree with often	2.37	2.36	-0.03	0.793
<b>Panel F: Strength of Sectarian Identity</b>				
Strength of sectarian identity index	0.11	0.09	-0.03	0.781
Willingness to change official sectarian affiliation (unwilling coded high)	3.5	3.54	0.04	0.710
Political party (1=supports a sectarian party)	0.48	0.47	-0.01	0.893
Relative strength of sectarian identity (strong coded high)	4.53	4.33	-0.20	0.432
Connectedness to sectarian leaders for access to benefits index	-0.39	0.05	0.41	0.001
Access to benefits through Zaim/politician	1.43	1.98	0.51	0.000
Access to benefits through a religious leaders	1.87	2.11	0.21	0.130
<b>Panel G: Other Social Group Identities</b>				
Strength of age group identity (strong coded high)	4.56	4.38	-0.24	0.330
Strength of gender identity (strong coded high)	5.52	5.26	-0.30	0.210
Strength of class identity (strong coded high)	3.53	4.01	0.47	0.046
Strength of Lebanese identity (strong coded high)	5.63	5.34	-0.31	0.223
Strength of occupational identity (strong coded high)	4.12	4.37	0.28	0.240
<b>Panel H: Session Implementation</b>				
Binary indicator for Moderator	0.37	0.42	0.06	0.331
Number of participants in session	0.92	0.98	0.08	0.006
People in the group known prior to the session	0.1	0.03	-0.08	0.017
<b>Panel I: Public Goods Game Materials</b>				
Answered all practice problem questions correctly (%)	0.84	0.9	0.07	0.051
Correctly answered amount earned from Group Pot (%)	0.97	0.99	0.01	0.395
Correctly answered Group Pot share (%)	0.92	0.94	0.04	0.218
Correctly answered total earned (%)	0.9	0.97	0.06	0.036

*All indices incorporate weights that correct for heterogeneous treatment assignment probabilities across strata.*



### G.3 GENDER DIFFERENCES IN BACKGROUND CHARACTERISTICS

Viewing the summary statistics for women relative to men in our sample helps make the case for focusing on cooperation between women rather than men. Table 28 shows the means for pre-treatment covariates for the full sample overall, as well as the difference in means between men and women. Important variation by gender emerges, as women and men in our sample differ in key ways that could affect the propensity for class bias to affect cooperation in group settings.

Turning first to differences in social status and economic background, the women in our sample are seven years older than the men (on average). At the same time, a higher share of the women are married (72% compared to just 36%), while a lower share of women have completed post-secondary education (61% vs. 71%). More than half of the women are occupied as homemakers (56%) compared to less than 1% of the men. It is possible that this is related to the relatively high share of women who are married in the sample. In terms of how this translates to occupational identity, women identify less strongly with their occupational identity than men do, which makes sense given that far fewer women in our sample work outside of the home (compared to men).

Other significant differences appear in connection to measures of sectarianism and gender identity in Lebanon. Women are more uncomfortable with the prospect of inter-sectarian marriage than men are. Women are also less willing to change their official sectarian affiliation than men are. This could reflect stronger attachment to sectarian identity among women compared to men, but it could also be a reflection of the fact that women face significantly greater legal barriers than men in marriage and family issues (Geagea and Fakhri, 2015). This could mean that reluctance to change sectarian affiliation or to marry outside of one's sect is more a reflection of the costs and challenges associated with doing so, rather than a reflective of stronger sectarian attachment among women.

In terms of other types of social identities, women more strongly identify with their gender identity than men do. This makes sense given the significant barriers women face as women in Lebanon, particularly when it comes to personal status laws (Geagea and Fakhri, 2015).

2015). Despite these shared challenges, the data suggests that there are also gender-related differences in group-based mobilization for collective action. The women in our sample report being more uncomfortable than men with discussing political and social or economic issues with people from other sectarian groups. This is consistent with evidence that suggests women try to avoid sectarian issues when organizing to take collective action (Joseph, 2001). Consistent with the history of women's organizing in Lebanon outlined in Section 3.3.1, women in our sample have more homogeneous social networks than men do, and women's exposure to people from other economic classes is (on average) quite limited.

While almost half of the women in our sample report that most of their friends belong to other sectarian groups, only about one-quarter of women have a similar number of friends in other economic classes. In contrast, men report generally more heterogeneous social networks. While our data does not allow us to identify how many of these social networks interactions occur only with other women, it does tell us something about women's social homogeneity relative to men. Women, compared to men, are less likely to report peer social networks composed of individuals from different sectarian and economic class backgrounds. This means that in the context of our study, women are more likely to be interacting with people from groups they do not have a lot of experience interacting with outside of the study environment. In this context, information about the group's composition is more likely to have different effects on men and on women.

Also in line with the available evidence on women's relative lack of participation in public political demonstrations, women in our sample are less likely than men to report signing a petition or attending a demonstration or protest march. While women are also statistically less likely than men to discuss issues with family, friends, and neighbors, the percentage of women who report having done so in the past is still quite high (67%), meaning most women discuss their concerns with their immediate social networks even if they are less likely to act publicly through protest or petition-signing to express their concerns. The fact that women are much less likely than men to report access to benefits through sectarian elites (such as religious leaders or *Za'im*) is also consistent with the narrative that women are more likely to depend on organizing collectively within their communities for access to needed material

goods and services than they are to depend on individual relationships with high-ranking sectarian representatives.

On the whole, the gender variation in pre-treatment covariates supports existing evidence on the history of women's organizing in Lebanon. Women in our sample generally have more homogeneous social networks, they avoid public debates on political issues, and they have limited access to material benefits through sectarian elites relative to men. Importantly, these are all dimensions along which we observe significant differences among women as well, where rich women are more similar to men than they are to poor women when it comes to these factors.

Table 28: Significant differences between men and women on pre-treatment covariates.

	Men's Mean	Women's Mean	Test of the Difference <i>b</i>	<i>p</i> -value
<b>Panel A: Demographics</b>				
Age	29	36	8	0.000
Married (%)	0.36	0.72	0.36	0.000
Post-secondary education (%)	0.71	0.61	-0.10	0.007
Christian (%)	0.33	0.33	0.00	0.951
Shia (%)	0.33	0.34	0.00	0.916
Sunni (%)	0.34	0.33	0.00	0.966
<b>Panel B: Economic class status</b>				
Economic status index	0.05	-0.08	-0.13	0.079
Value of total household assets	1.66	1.63	-0.04	0.472
Estimated area (size) of household	1.71	1.73	0.01	0.907
Owns a summer house	2.04	2.04	-0.01	0.945
Power alternatives during an outage	2.60	2.48	-0.11	0.143
Can afford to vacation at least once per year	1.90	1.82	-0.08	0.235
Frequency of dining out per month	2.15	2.06	-0.09	0.134
Monthly household net income	6.79	6.64	-0.16	0.175
Subjective monthly household income	3.31	3.27	-0.04	0.694
Total net monthly household income	6.37	6.05	-0.30	0.038
Household's economic class	1.03	1.06	0.02	0.694
Students (%)	0.15	0.12	-0.04	0.107
Homemakers (%)	0.00	0.56	0.56	0.000
<b>Panel C: Prejudice</b>				
Prejudice against members of other sects index	-0.10	0.15	0.26	0.002
Marrying someone from another sect (discomfort coded high)	2.08	2.52	0.44	0.000
Having a physician from another sect (discomfort coded high)	1.32	1.36	0.04	0.395
Being neighbors with someone from another sect (discomfort coded high)	1.52	1.51	0.00	0.996
Discussing politics with someone from another sect (discomfort coded high)	1.95	2.18	0.26	0.006
Discussing social/econ issues w/ someone from another sect (discomfort coded high)	1.57	1.69	0.13	0.050
Being supervised at work by someone from another sect (discomfort coded high)	1.67	1.65	-0.04	0.549
Being friends with someone from another sect (discomfort coded high)	1.35	1.34	0.00	0.968
<b>Panel D: Political Activity</b>				
Political activity/engagement index	0.11	-0.17	-0.31	0.000
Discussed issues with family, friends, or neighbors	0.73	0.67	-0.07	0.039
Talked to party members/Zaim/MPs about political issues	0.14	0.10	-0.03	0.235
Signed a petition	0.08	0.04	-0.04	0.021
Attended a demonstration/protest march	0.41	0.27	-0.17	0.000
<b>Panel E: Social Networks</b>				
Homogeneity of social networks (sect and class) index	-0.07	0.11	0.22	0.008
Family, friends, acquaintances in other economic classes (none coded high)	2.81	2.91	0.11	0.148
Family, friends, acquaintances in other sects (none coded high)	2.58	2.78	0.24	0.006
Frequency discussing issues with people you disagree with often	2.30	2.36	0.05	0.467
<b>Panel F: Strength of Sectarian Identity</b>				
Strength of sectarian identity index	-0.07	0.10	0.16	0.047
Willingness to change official sectarian affiliation (unwilling coded high)	3.34	3.52	0.17	0.009
Political party (1=supports a sectarian party)	0.47	0.48	0.01	0.821
Relative strength of sectarian identity (strong coded high)	4.23	4.43	0.19	0.247
Connectedness to sectarian leaders for access to benefits index	0.11	-0.17	-0.30	0.000
Access to benefits through Zaim/politician	2.01	1.71	-0.31	0.000
Access to benefits through a religious leaders	2.19	1.99	-0.22	0.008
<b>Panel G: Other Social Group Identities</b>				
Strength of age group identity (strong coded high)	4.62	4.47	-0.08	0.644
Strength of gender identity (strong coded high)	4.91	5.39	0.50	0.002
Strength of class identity (strong coded high)	3.91	3.77	-0.14	0.332
Strength of Lebanese identity (strong coded high)	5.69	5.48	-0.20	0.209
Strength of occupational identity (strong coded high)	4.83	4.25	-0.63	0.000
<b>Panel H: Session Implementation</b>				
Binary indicator for Moderator	0.39	0.40	0.00	0.987
Number of participants in session	0.95	0.95	0.00	0.887
People in the group known prior to the session	0.11	0.06	-0.04	0.155
<b>Panel I: Public Goods Game Materials</b>				
Answered all practice problem questions correctly (%)	0.82	0.87	0.06	0.025
Correctly answered amount earned from Group Pot (%)	0.97	0.98	0.01	0.232
Correctly answered Group Pot share (%)	0.90	0.93	0.03	0.143
Correctly answered total earned (%)	0.92	0.93	0.03	0.221

*All indices incorporate weights that correct for heterogeneous treatment assignment probabilities across strata.*

## APPENDIX H

### ROBUSTNESS CHECKS

This section presents robustness checks for the main results. Specifically, we check the robustness of results to the inclusion of additional control variables, to the use of block fixed effects, and to the use of an alternative set of weights to account for unequal treatment assignment probabilities.

To confirm the robustness of the results, we run all models with two additional control variables that could have influenced the findings. First, we include an additional count variable for the number of group members an individual knew prior to participating in the experiment. Research shows that interacting with friends or acquaintances rather than strangers affects contributions in cooperation games. Second, we include a measure that captures participants' comprehension of the public goods game payoff structure that we created by scoring answers in a 'Practice Problem' as correct or incorrect. This variable equals 1 if the participants correctly answered all three questions on the example exercise worksheet provided prior to playing Round 1 of the game. This helps us control for the possibility that some participants may have played non-strategically because of confusion over payoffs. Table 29 presents the main results with these two additional control variables included in the analysis described in the main text in Section 3.4.2. Table 30 presents the main results in Model 1 (with all original controls and moderator fixed effects) and compares it to the same model but with the addition of strata fixed effects (Model 2). Table 31 presents the main results with alternative weights.

Table 29: Main results with additional controls.

	<i>Same Class Mean</i>	<b>Model 1</b>	<b>Model 2</b>	<i>N</i>
<b>Women overall</b>				
<i>Mixed class</i>	4153	-1374*** (367) 0.000	-1294*** (384) 0.001	285
<b>Poor women only</b>				
<i>Mixed class</i>	3830	-720 (494) 0.148	-947* (556) 0.091	142
<b>Rich women only</b>				
<i>Mixed class</i>	4476	-2034*** (540) 0.000	-1726*** (637) 0.008	143

**\*p<0.10 \*\*p<0.05 \*\*\*p<0.01** Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.

Table 30: Main results with strata fixed effects.

	<i>Same Class Mean</i>	<b>Model 1</b>	<b>Model 2</b>	<i>N</i>
<b>Women overall</b>				
<i>Mixed class</i>	4153	-1321*** (375) 0.001	-1305*** (374) 0.001	285
<b>Poor women only</b>				
<i>Mixed class</i>	3830	-971 (534) 0.072	-1057* (559) 0.061	142
<b>Rich women only</b>				
<i>Mixed class</i>	4476	-1793*** (615) 0.004	-1743*** (607) 0.005	143

**\*p<0.10 \*\*p<0.05 \*\*\*p<0.01** Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has all controls and moderator fixed effects; Model 2 includes controls and moderator fixed effects and strata fixed effects.

Table 31: Main results with alternative weights.

	<i>Same Class Mean</i>	<b>Model 1</b>	<b>Model 2</b>	<i>N</i>
<b>Women overall</b>				
<i>Mixed class</i>	4108	-1310*** (363) 0.000	-1279*** (359) 0.000	285
<b>Poor women only</b>				
<i>Mixed class</i>	3786	-677 (493) 0.173	-904* (533) 0.093	142
<b>Rich women only</b>				
<i>Mixed class</i>	4431	-1952*** (532) 0.000	-1788*** (575) 0.002	143

---

**\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$**  Robust standard errors in parentheses. All models incorporate weights that correct for unequal treatment assignment probabilities across strata. Model 1 has no controls; Model 2 includes controls and moderator fixed effects.

## APPENDIX I

### ADDITIONAL DESCRIPTIVE ANALYSIS

#### I.1 DISTRIBUTION OF CONTRIBUTIONS IN ALL-MALE GROUPS

Figure 10 shows the pattern of contributions conditional on treatment type and socioeconomic status for men in our sample. Where women in our sample clearly have a negative reaction to the mixed-class treatment, men seem to respond to the mixed-class group setting in a much more positive way regardless of socioeconomic status. Both rich and poor men in our sample contribute more in mixed-class than in same-class groups.



## Contributions to the Public Good

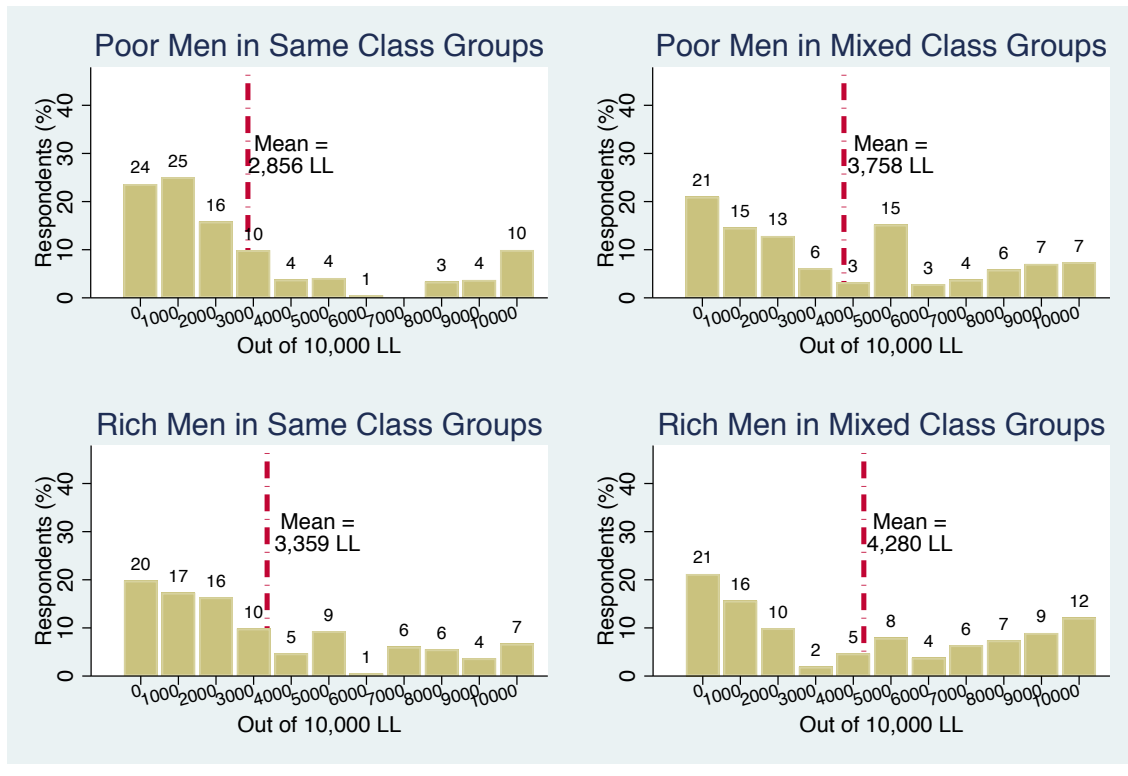


Figure 10: Distribution of contributions to the public good by men in same-class versus mixed-class group settings, disaggregated by socio-economic status of participants.

## I.2 CONTRIBUTIONS BY WOMEN CONDITIONAL ON CROSS-CUTTING SECTARIAN TREATMENT

The descriptive evidence for contributions cross-cut by the mixed-sect versus same-sect group composition treatment suggests that the general average negative effect of the mixed-class group treatment on cooperation holds, especially for rich women, regardless of the sectarian composition of the group. This lends support to our argument that we should interpret our findings as evidence that it is the class cleavage, more so than the ethnic cleavage, that is driving contribution behavior among women.

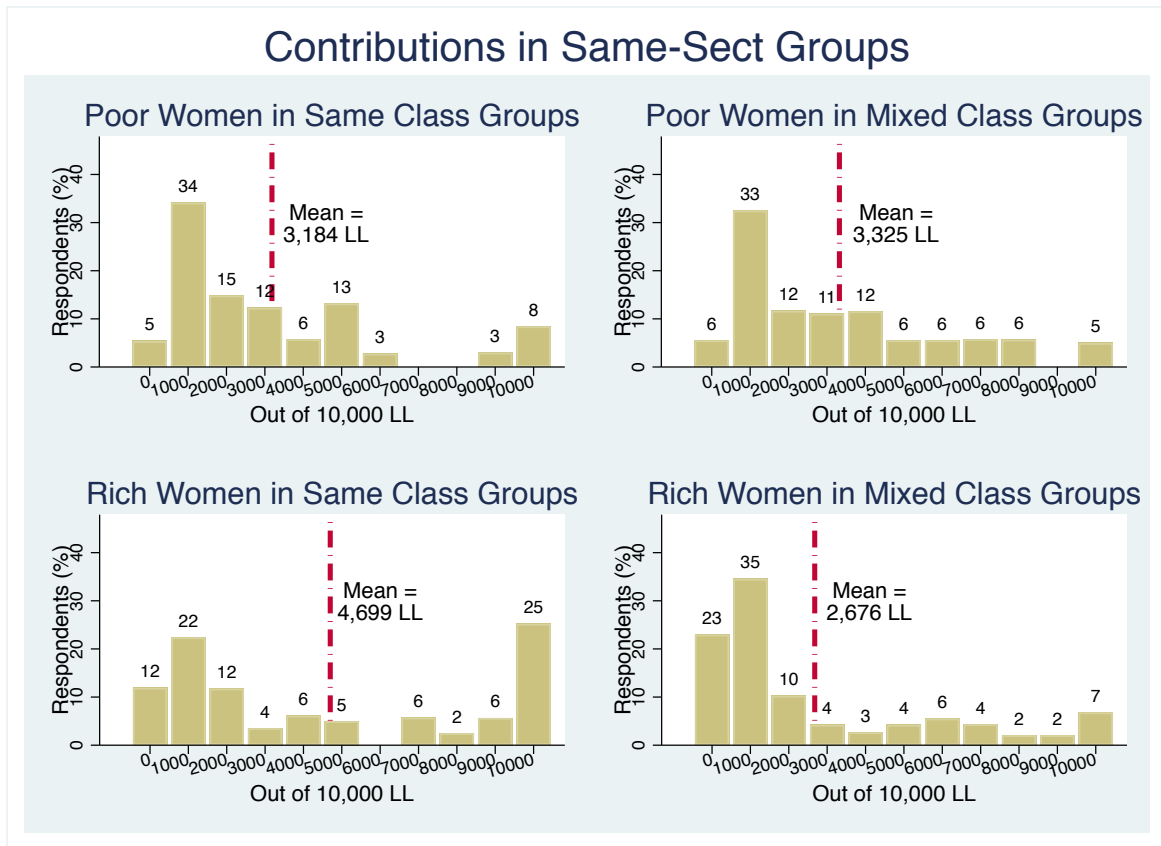


Figure 11: Distribution of contributions to the public good by women in same-sect groups: same-class versus mixed-class group settings, disaggregated by socio-economic status of participants.

## Contributions in Mixed-Sect Groups

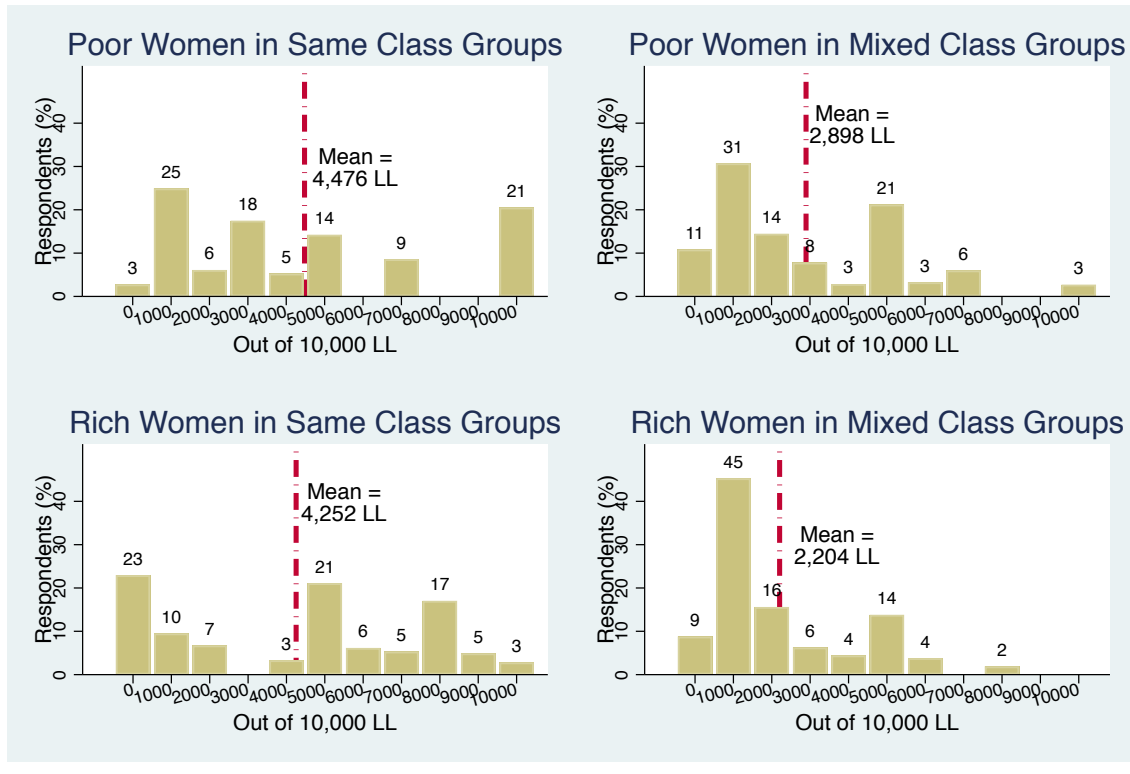


Figure 12: Distribution of contributions to the public good by women in mixed-sect groups: same-class versus mixed-class group settings, disaggregated by socio-economic status of participants.

## APPENDIX J

### THE PUBLIC GOODS GAME

In this section, we present the instruments used to implement and collect data during the public goods game exercise, including:

1. The script used by the Assistant Moderator to introduce the game to participants and guide them through it.
2. The example exercise worksheet used by participants to gauge comprehension of payoffs.
3. The practice grid exercise participants completed before Round 1 of the game.
4. The rubric used by the Moderation Team to record the public goods game data from Round 1 (and Round 2).

A detailed field manual was also provided to all members of the Moderation Team and is available from the authors upon request.

## Assistant Moderator Public Goods Script (BULLETS)

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### INTRODUCTION KEY POINTS:

- **Participatory exercise that reflects real world choices that people sometimes have to make**
- **Already earned an additional 10,000 LL** (for filling out the pre-survey)
- Can use all, none, or some of it in this group activity
- Doing this twice, once before our group discussion, and once again afterwards
- ***We will not reveal the results of either round of the exercise until the end of the session***
- Only one of the two rounds will “count” in terms of how much extra money you earn today
- The round that “counts” will be determined randomly after the second round

### EXERCISE RULES:

- ***No talking to each other!*** Clarifying questions about how the activity works only
- Each have earned your own 10,000 LL
- Contribute any amount from 0 up to 10,000 LL in increments of 1,000 LL
- I will add up everything you individually contribute and increase it by half (multiply by 1.5)
- Then redistribute this new total back to all 6 members of the group, whether they contributed or not
- Your share of the group pot plus whatever you did not contribute will be your total extra earnings
- ***This means that how much you stand to gain or to lose from contributing to the group pot depends both on your private decision about what to contribute, as well as on the private decisions made by every other member of this group***

### LOOK AT SOME EXAMPLES:

- Remove the “Examples Worksheet” from your packets

\*\* Moderator Copy of the “Examples Worksheet” inserted here \*\*

#### EXAMPLES WORKSHEET (Asst. Mod. Copy)

**Example 1** [Note: This is an extreme example where Participant 1 contributes a lot and everyone else contributes little.]

Contributors	To Group Pot	Keep privately	Earned from Group Pot	Total Earned
Participant 1	8,000	2,000	4,000	6,000
Participant 2	0	10,000	4,000	14,000
Participant 3	0	10,000	4,000	14,000
Participant 4	2,000	8,000	4,000	12,000
Participant 5	2,000	8,000	4,000	12,000
Participant 6	4,000	6,000	4,000	10,000
Total in group pot	16,000			
Multiplied by 1.5	24,000			
Each person's share from Group Pot	24,000/6= 4,000			

### DEMONSTRATING EXAMPLE 1 WITH CASH (spoken script in *bold Italics*):

- Each participant in the group has 10,000 LL*** (Separate the 10,000 LL into 6 piles, one representing each person.)
- In Example 1, Participant 1*** (indicate one pile of 10,000 as “Participant 1”) ***decides to contribute 8,000 and keep 2,000*** (Now, physically move 8,000 LL from that pile to a “group pot” pile and leave 2,000 LL behind)
- Meanwhile, two of the other participants contribute nothing and keep all 10,000*** (move nothing from those two piles to the group pot).
- At the same time, two of the others contribute 2,000 each, but keep 8,000*** (move 2,000 from two of the piles to the group pot).
- And the last one contributes 4,000 and keeps 6,000*** (move 4,000 from that pile to the group pot pile).
- I will multiply whatever is contributed to the group pot pile by 1.5. So, the total here in the group pot is 16,000*** (Count it out for them so they see how it is just like in the example)
- 16,000 times 1.5 is 24,000, so I (as the Asst. Mod.) will add an additional 8,000 to the pot, so it is now 24,000*** (physically add an additional 8,000 to the pile)
- This 24,000 gets divided evenly back between the 6 participants no matter how much each contributed individually*** (Distribute it evenly to each pile of what was set aside as “kept” by each)
- So, now you see that Participant 1 has 6,000; Participant 2 has 14,000; Participant 3 has 14,000; Participant 4 has 12,000; Participant 5 has 12,000; and Participant 6 has 10,000.***

**Example 2** [Note: This is an extreme example where Participant 1 contributes little and everyone else contributes a lot.]

Contributors	To Group Pot	Keep privately	Earned from Group Pot	Total Earned
Participant 1	1,000	9,000	12,000	21,000
Participant 2	9,000	1,000	12,000	13,000
Participant 3	9,000	1,000	12,000	13,000
Participant 4	9,000	1,000	12,000	13,000
Participant 5	10,000	0	12,000	12,000
Participant 6	10,000	0	12,000	12,000
Total in group pot	48,000			
Multiplied by 1.5	72,000			
Each person's share from Group Pot	72,000/6= 12,000			

**DEMONSTRATING EXAMPLE 2 WITH CASH** (*spoken script in bold Italics*):

- ***Each participant in the group has 10,000 LL*** (Separate the 10,000 LL into 6 piles, one representing each person.)
- ***In Example 2, Participant 1*** (indicate one pile of 10,000 as “Participant 1”) ***decides to contribute 1,000 and keep 9,000*** (Now, physically move 1,000 LL from that pile to a “group pot” pile and leave 9,000 LL behind)
- ***Meanwhile, three of the other participants contribute 9,000 each and keep 1,000 each*** (move 9,000 from those three piles to the group pot).
- ***At the same time, the remaining two participants contribute all 10,000 each and keep nothing*** (move 10,000 from two of the piles to the group pot).
- ***I will multiply whatever is contributed to the group pot pile by 1.5. So, the total here in the group pot is 48,000*** (Count it out for them so they see how it is just like in the example)
- ***48,000 times 1.5 is 72,000, so I (as the Asst. Mod.) will add this additional earnings of 24,000 to the pot, so the pot is now 72,000*** (physically add an additional 24,000 to the pile)
- ***This 72,000 gets divided evenly back between the 6 participants no matter how much each contributed individually. In this case, that is 12,000 per participant, or 72,000 divided by 6.*** (Distribute it evenly to each pile of what was set aside as “kept” by each)
- ***So, now you see that Participant 1 has 21,000; Participants 2 and 3 and 4 have 13,000; and Participants 5 and 6 have 12,000 LL.***

**EXAMPLE FOLLOW-UP QUESTIONS:**

- **When do participants take home the least money?**
  - Answer: When they contribute a lot but no one else does.
- **When do participants take home the most money?**
  - Answer: When they keep everything but other people in the group contribute a lot.

### REPEAT KEY POINTS:

- It is possible for everyone to contribute different amounts.
- The “bonus” of 1.5 is only applied to money that is contributed to the Group Pot, and not to the amount that individuals choose to keep privately.
- Everyone will benefit equally from the Group Pot earnings, regardless of whether they contributed or not (like in Example 1).
- No one will ever know what anyone else contributed – totally anonymous.

### PRACTICE PROBLEM:

- Fill in the blank columns in the “Practice Problem” exercise at the bottom of the “Examples Worksheet.”
- Complete this practice problem quietly on your own.

#### Practice Problem

Contributors	To Group Pot	Keep privately	Earned from Group Pot	Total Earned
Participant 1	6,000	4,000	10,000	14,000
Participant 2	5,000	5,000	10,000	15,000
Participant 3	5,000	5,000	10,000	15,000
Participant 4	7,000	3,000	10,000	13,000
Participant 5	7,000	3,000	10,000	13,000
Participant 6	10,000	0	10,000	10,000
Total in group pot	40,000			
Multiplied by 1.5	60,000			
Each person's share from Group Pot?	60,000/6 = 10,000			

**\*\* Note for the Asst. Moderator:** The Participant Copy of the “Examples Worksheet” is blank in all of the places where you have values highlighted in **RED** above. Briefly compare each person’s answers to the correct answers you have here. If you see consistent issues across participants, make sure to clarify again how the activity works. \*\*

### OTHER STEPS BEFORE ROUND #1:

- Collect each person’s “Examples Worksheet.”
- Briefly check his or her answers to the practice problem. If you notice that some people are struggling to understand how the exercise works, make a note of what the issue seems to be and clarify how the activity works a final time before proceeding.
- Set the Examples Worksheets facedown and off to the side. DO NOT hand them back to the participants.
- Direct participants to remove the “Practice Grid” handout from their packets and to fill them out quietly.
- Collect Practice Grids and set them facedown and off to the side.



#### ROUND 1 SCRIPT:

- Any questions?
- Remember, **no talking!**
- [Pass out envelopes with slip of paper inside]
- Circle the option corresponding to **how many LL you would like to contribute to the group pot**
- **No right or wrong answer**
- **Your decision will remain anonymous**
- Put slip of paper back into the envelope and pass it to me

[Put the envelopes in box labeled “Round 1” at the front of the room.]

[Take the Examples Worksheets AND the Practice Grids with you when you exit the moderation space.]

#### ROUND 2 SCRIPT:

- Works the same way that it worked the first time
- Remember, **no talking!**
- All have **10,000 LL that you earned** already today
- Decide **how much to keep for yourself or to contribute to the group pot**
- Everything contributed to the **group pot will get increased by half** (multiplied by 1.5) **and distributed back equally** to all members of the group.
- **How much you stand to gain or to lose from contributing to the group pot depends both on your private decision about what to contribute, as well as on the private decisions made by every other member of this group**
- You can **make whatever decision you want**, it can be the same or different from the first round
- **No one will ever know who contributed what** – all contributions are anonymous
- Afterwards, **will flip a coin to see which round will count** for actual earnings
- Any questions?
- [Pass out envelopes] Inside your envelope there is a slip of paper just like in the first round – **circle the amount you want to contribute to the group pot**

[Do the exercise. Collect the envelopes and place them in the second labeled shoebox.]

[Do the coin flip and take that box of envelopes from the room. Do not collect the other envelopes for data entry until all participants leave.]

Examples Worksheet
Group ID:
Participant ID:

**Example 1:**

Contributors	To Group Pot	Keep privately	Earned from Group Pot	Total Earned
Participant 1	8,000	2,000	4,000	6,000
Participant 2	0	10,000	4,000	14,000
Participant 3	0	10,000	4,000	14,000
Participant 4	2,000	8,000	4,000	12,000
Participant 5	2,000	8,000	4,000	12,000
Participant 6	4,000	6,000	4,000	10,000
Total in group pot	16,000			
Multiplied by 1.5	24,000			
Each person's share from Group Pot	24,000/6= 4,000			

**Example 2:**

Contributors	To Group Pot	Keep privately	Earned from Group Pot	Total Earned
Participant 1	1,000	9,000	12,000	21,000
Participant 2	9,000	1,000	12,000	13,000
Participant 3	9,000	1,000	12,000	13,000
Participant 4	9,000	1,000	12,000	13,000
Participant 5	10,000	0	12,000	12,000
Participant 6	10,000	0	12,000	12,000
Total in group pot	48,000			
Multiplied by 1.5	72,000			
Each person's share from Group Pot	72,000/6= 12,000			

**Practice Problem**

Contributors	To Group Pot	Keep privately	Earned from Group Pot	Total Earned
Participant 1	6,000	4,000		
Participant 2	5,000	5,000		
Participant 3	5,000	5,000		
Participant 4	7,000	3,000		
Participant 5	7,000	3,000		
Participant 6	10,000	0		
Total in group pot	40,000			
Multiplied by 1.5	60,000			
Each person's share from Group Pot?	60,000/6 =			

<b>Practice Grid</b>																																						
<b>Group ID:</b>																																						
<b>Participant ID:</b>																																						
<p><i>As a final round of practice before we begin Round 1 of the exercise, please answer the following questions. There should be NO COMMUNICATING during this exercise.</i></p> <p><b>Question 1:</b> If you had no idea what the other members of the group had contributed to the Group Pot, how much would you choose to contribute out of your 10,000 LL?</p> <p>Please enter an amount out of 10,000 LL:</p> <div style="border: 1px solid black; width: 150px; height: 30px; margin: 10px auto; text-align: right; padding-right: 5px;">LL</div> <p><b>Question 2:</b> Now, how much you would contribute to the Group Pot if you knew the following information about what the other members of the group had contributed?</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 30%;"></th> <th style="width: 35%;">Average contribution by each of the other 5 group members:</th> <th style="width: 35%;">What would you contribute if you knew for sure that this was true?</th> </tr> </thead> <tbody> <tr><td style="text-align: left;"><b>Scenario #1</b></td><td>0 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #2</b></td><td>1,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #3</b></td><td>2,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #4</b></td><td>3,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #5</b></td><td>4,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #6</b></td><td>5,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #7</b></td><td>6,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #8</b></td><td>7,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #9</b></td><td>8,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #10</b></td><td>9,000 LL</td><td>LL</td></tr> <tr><td style="text-align: left;"><b>Scenario #11</b></td><td>10,000 LL</td><td>LL</td></tr> </tbody> </table>				Average contribution by each of the other 5 group members:	What would you contribute if you knew for sure that this was true?	<b>Scenario #1</b>	0 LL	LL	<b>Scenario #2</b>	1,000 LL	LL	<b>Scenario #3</b>	2,000 LL	LL	<b>Scenario #4</b>	3,000 LL	LL	<b>Scenario #5</b>	4,000 LL	LL	<b>Scenario #6</b>	5,000 LL	LL	<b>Scenario #7</b>	6,000 LL	LL	<b>Scenario #8</b>	7,000 LL	LL	<b>Scenario #9</b>	8,000 LL	LL	<b>Scenario #10</b>	9,000 LL	LL	<b>Scenario #11</b>	10,000 LL	LL
	Average contribution by each of the other 5 group members:	What would you contribute if you knew for sure that this was true?																																				
<b>Scenario #1</b>	0 LL	LL																																				
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<b>Scenario #10</b>	9,000 LL	LL																																				
<b>Scenario #11</b>	10,000 LL	LL																																				

PUBLIC GOODS GAME RECORD SHEET				
Group ID:				
Date of Discussion:				
Assistant Moderator:				
Participant ID (Copy from contribution slips)	Round 1		Round 2	
	Money Contributed to Pot	Money to Receive**	Money Contributed to Pot	Money to Receive**
<b>TOTAL IN POT</b>				
<b>TOTAL PER PERSON (FROM POT)</b>				
<b>Round that counts (circle one):</b>	1		2	
**Money to receive per person = 10,000 LL – money contributed + TOTAL PER PERSON				

## APPENDIX K

### UGANDA'S ADMINISTRATIVE STRUCTURE AND MEASURING COMPETITION

Uganda is divided into 127 districts (plus the capital of Kampala) for the purpose of public administration. Each of these 128 districts is further divided into counties and subcounties. During a general election, voters within each district elect representatives to serve at the subcounty, district, and national levels. One-third of all seats must be held by women representatives at each level of government. To ensure this, certain seats are reserved for women on the subcounty, municipal, and district councils, and each district is granted one seat in Parliament for a woman representative. Only women can run in these reserved seat contests, but they are voted on by all eligible voters who reside within the constituency, including both men and women.

Figure 13 is a stylized illustration of the structure of the electoral system of representation in Uganda. At the lowest level of Uganda's governing structure are villages, typically consisting of 50 or more households led by a local council (LC1).<sup>1</sup> Multiple villages are grouped into a parish, led by a local council (LC2). Multiple parishes are then grouped into a subcounty, which is run by the elected local council (LC3). Multiple subcounties are then grouped into a single county, and each county elects one representative to serve in the national Parliament as that constituency's representative. Each subcounty also elects representatives to serve in

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<sup>1</sup>The explanation of Uganda's administrative structure given in this paragraph is adapted from the description available on Mbarara District's website: <https://www.mbarara.go.ug/district/administrative-structure>.

the district-level local council as LC5 councilors. In municipalities (cities), the sub-county level is referred to as a division. Multiple divisions make up the county (municipality). This means that a division representative in a municipality is equivalent to an LC3 councilor in a rural county. Because they are equivalent to rural counties, each municipality also elects a representative to the national Parliament.

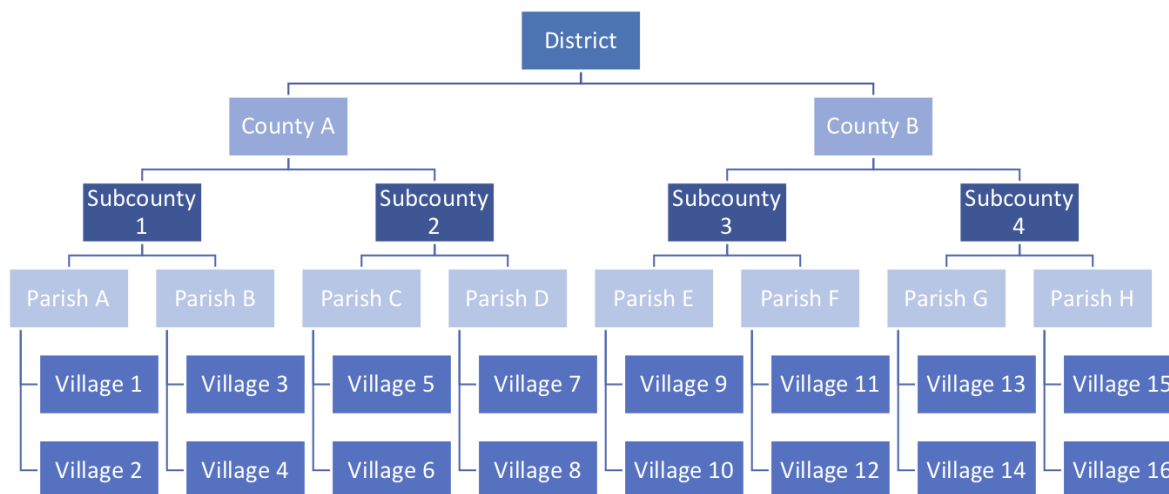


Figure 13: Illustration of Uganda's electoral structure.

To construct the main measure of electoral competition, I first calculated the average margin of victory across all LC3 woman representative elections in a given county in the 2011 general elections. In the context of Figure 13, this means that to arrive at the mean margin of victory for women LC3 representatives in County A, I calculated the average margin of victory for LC3 women who won in Subcounty 1 and Subcounty 2. That value is the measure of electoral competition I then assigned to all women I surveyed in the 2016 election cycle who contested for seats as representatives within County A. Because all LC3, LC4, and LC5 women candidates for office compete for votes at the county level or below, this measure gives a general sense of the level of electoral competition faced by women competing for office in County A overall.

For a more specific example, Mbarara District, one of the districts with observations in my candidate data, had 3 counties in the 2011 general election. One of these counties was Mbarara Municipality, which consisted of 3 subcounties. In one of these subcounties, there was only 1 LC3 woman representative seat in 2011, while in the second subcounty there were 6 LC3 women representative seats and in the third subcounty there were 7 LC3 women representative seats. Across these 14 electoral contests, only 1 seat was won by a woman candidate without facing any opposition; the other 13 seats were won in competitive contests. However, the margin of victory for each contest varied. To generate a single measure of electoral competition to represent all women in my dataset competing for votes in Mbarara Municipality (county), I calculated the average margin of victory across all 14 of these LC3 (subcounty) contests. To account for the fact that the number of votes varies considerably across races, I converted the actual vote count for all 2011 candidates in a given race as a percentage out of 100 possible votes. For instance, if the winner received 1000 votes and the loser received 500 votes, I coded that as the winner receiving 67 % of the vote and the loser as receiving 33 % of the vote. This, in turn, would equate to a margin of victory for the winner in that race of about 34 %. If a candidate won without facing opposition, I recorded this as a margin of victory of 100 %. Using this method, I found the average margin of victory for the 14 LC3 women representatives in Mbarara Municipality in 2011 to be 28.5%. In my analysis I use this value of 28.5 as the measure of electoral competition for all women candidates in my dataset who competed for votes in 2016 in Mbarara Municipality.

I prefer this county-level measure of electoral competition over a district-level measure because it allows for more variation within the dataset, but also for an important substantive reason. Namely, by assigning a value of electoral competition at the county level, I preserve the potential to capture important within-district differences in the level of competition women face in rural compared to urban settings. There are a number of good reasons to expect that elections may be more competitive in urban areas than in rural areas in general. By defining competition at the county level rather than the district level, I retain the distinction between urban and rural counties in the dataset rather than aggregating all of these responses into a single measure of competition at the district level. This is possible because each municipality in Uganda is its own county for electoral purposes. Thus, in my

dataset, a district may contain a more competitive county (perhaps the municipality) as well as two less competitive counties (perhaps two rural counties).

Figure 14 gives a sense of how many elections were won unopposed in 2011 across the constituencies represented in the sample. This further reinforces the need to consider unopposed winners alongside opposed winners when calculating the average margin of victory at the constituency level, since in some instances a huge percentage of subcounty elections in 2011 were won by women candidates who faced no opposition.

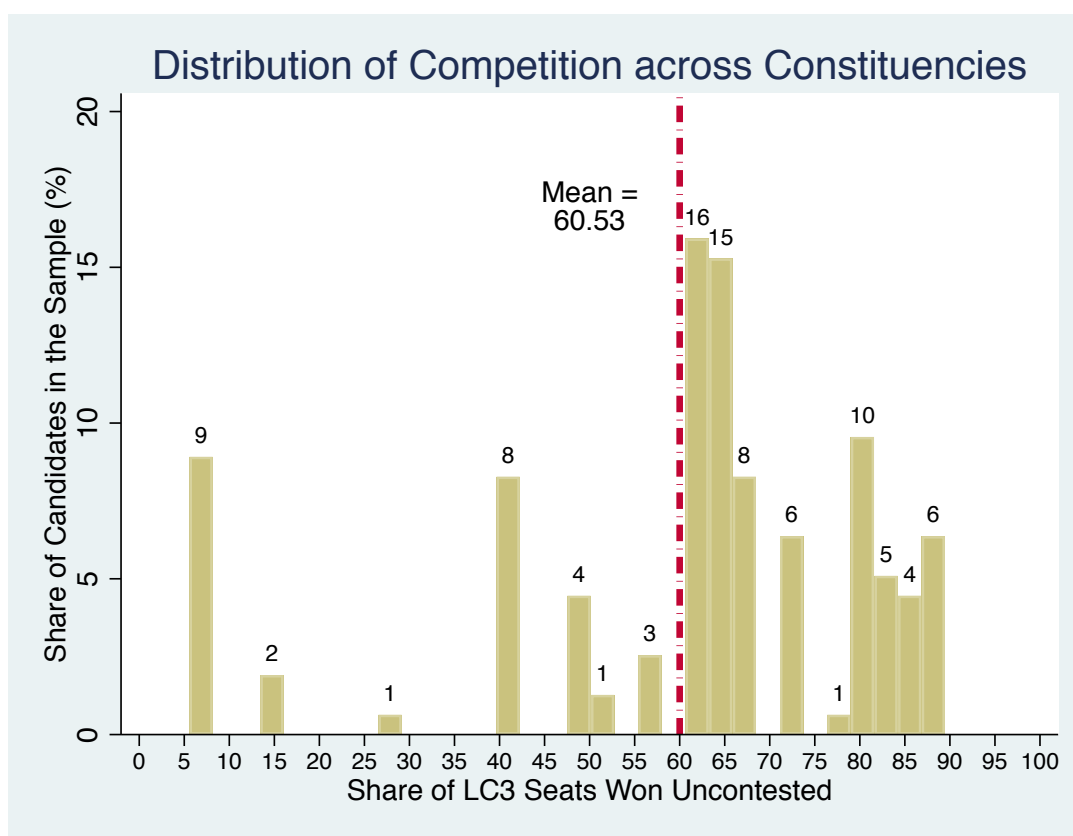


Figure 14: The level of competition across constituencies represented in the sample of women candidates surveyed.



Figure 14 shows the share of LC3 seats won uncontested in 2011 for each constituency represented in the sample. Removing those elections where the 2011 candidates won in the general without facing any opponents and calculating the average margin of victory for only those elections where there was competition produces the distribution shown in Figure 15. While this distribution of the average margin of victory yields a more even distribution, it risks obscuring the extent to which a constituency might only have one competitive election at the LC3 level in 2011, whereas all other elections were won uncontested. For this reason, I use the original measure of the average margin of victory, including those who won without facing opposition, in the main analysis.

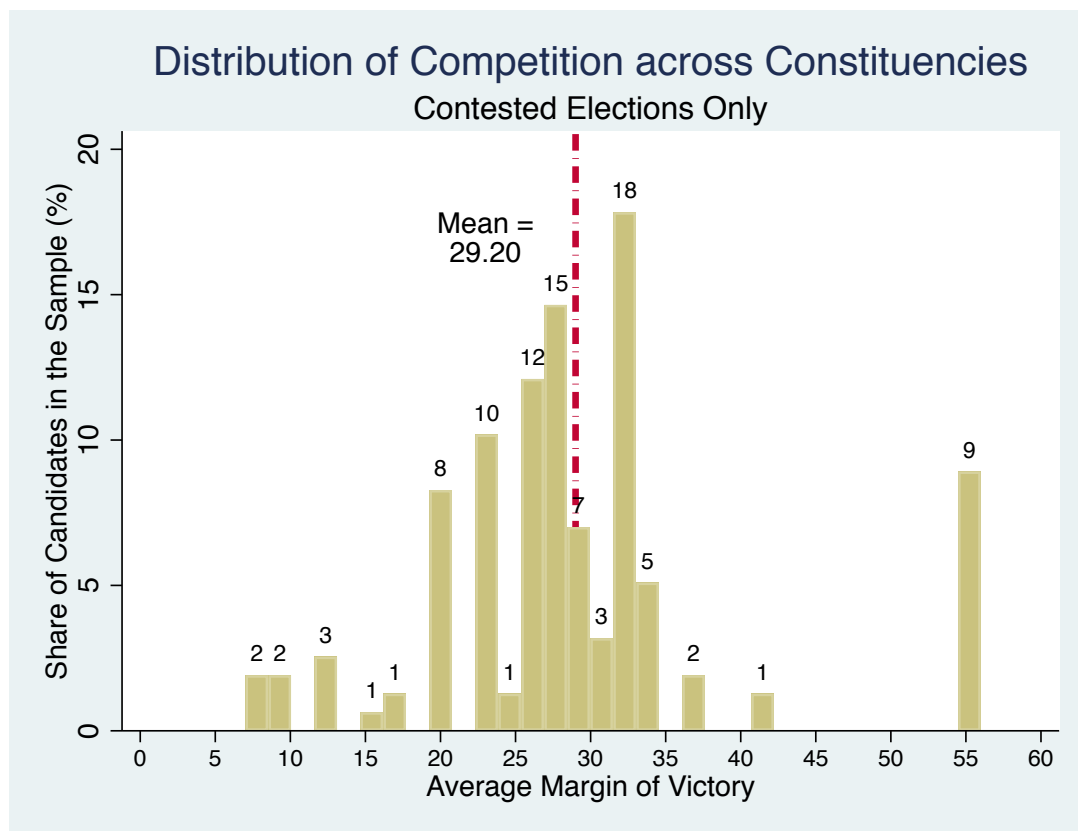


Figure 15: The level of competition across constituencies represented in the sample of women candidates surveyed.

## APPENDIX L

### CONSTRUCTING THE DEPENDENT VARIABLES USING PRINCIPAL COMPONENT ANALYSIS

This section details the procedure I followed to identify which variables had similar underlying relationships in the data so that I could correctly locate measures of clientelistic (or, in-group) representation versus representation of women constituents' interests more broadly. I used principal component analysis to investigate the nine survey question response options for constituent groups candidates could plan to prioritize for policy-making if elected to office. Candidates were asked to identify the top three groups whose needs they intended to prioritize if elected. I then coded responses for each of the nine categories for all 157 surveys into a binary variable that takes the value of '1' if a given candidate intends to prioritize that constituent group in their top three and '0' if otherwise. To prepare the components for use in the analysis, I predicted the scores of the components after estimating them using STATA's 'pca' command.<sup>1</sup> A scree plot of the eigenvalues produced in the principal component analysis of the nine response options for the dependent variable (representation priorities) is presented in Figure 16. The plot suggests that variation in the nine measures is largely explained by three underlying component measures (those with eigenvalues greater than 1).

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<sup>1</sup>Details on employing principal-component analysis with STATA are available here: <https://www.stata.com/features/overview/principal-components/>.

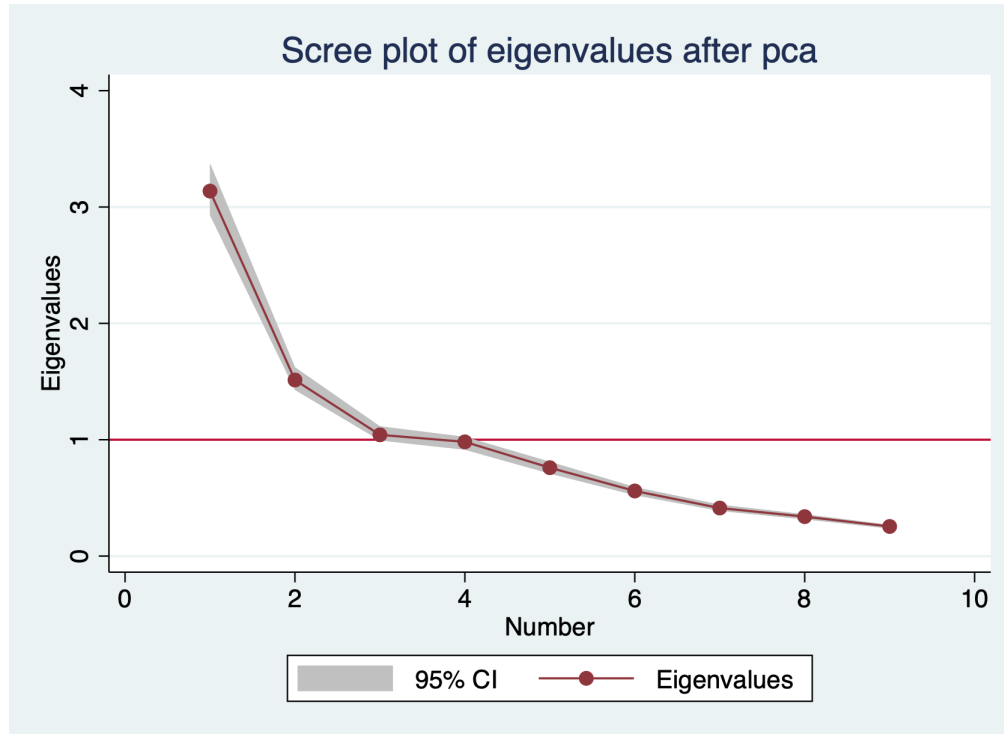


Figure 16: Eigenvalues plot for the nine answer options for group representation priorities.

Together, these three components explain approximately 63% of the variation in the data, as shown in Figure 17. Retaining these three underlying component indices produces component loadings as shown in Figure 18. For the most part, youth and women load together; party agents and family/friends load together; and, coethnics, members of the same religion, and members of the same clan or tribe load together. Depending on the rotation, disabled and physically vulnerable people loads separately from the other components, while all people in the community is always by itself (see Figure 18).

Principal components/correlation

Number of obs = 157

Number of comp. = 9

Trace = 9

Rotation: (unrotated = principal)

Rho = 1.0000

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	3.13687	1.62373	0.3485	0.3485
Comp2	1.51314	.471071	0.1681	0.5167
Comp3	1.04207	.0602288	0.1158	0.6325
Comp4	.981842	.222157	0.1091	0.7415
Comp5	.759686	.19994	0.0844	0.8260
Comp6	.559746	.146809	0.0622	0.8882
Comp7	.412937	.0737391	0.0459	0.9340
Comp8	.339198	.0846925	0.0377	0.9717
Comp9	.254505	.	0.0283	1.0000

Figure 17: Variation in the data explained by the principal components.

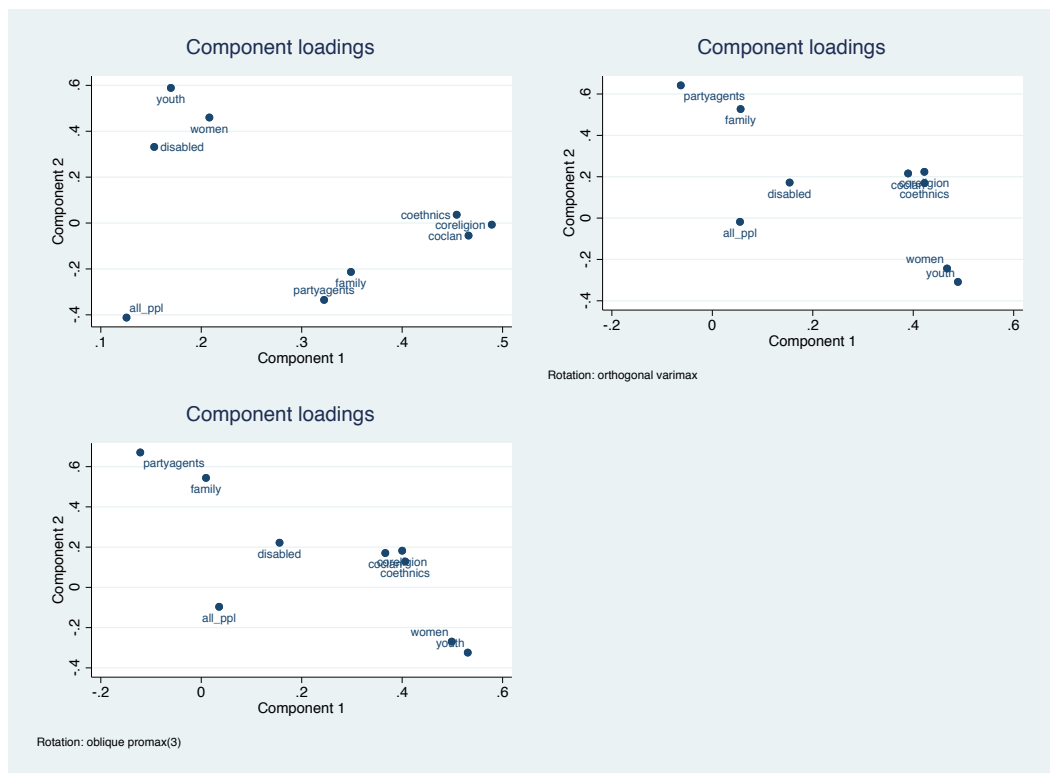


Figure 18: Component loadings for the principal component analysis: without rotation (top left), with varimax rotation (top right), and with promax rotation (bottom left).

The correlation between the original nine response options and the three underlying components is presented in Figure 20. Correlation values above 0.3 and below -0.3 suggest a strong correlation between the components and the trace variables. For the most part, the share of the variation in each trace variable left unexplained by the component indices is fairly low, except in the case of prioritizing friends/family (42%), women (51%), and the disabled/physically vulnerable (53%). For each of these trace elements, the share of variation in the data left unexplained by the components is more than 42 %. For this reason, I do not solely rely on the PCA indices for analysis of the main dependent variables, but also check the sensitivity of the results to indices produced using Anderson’s Inverse Covariance Weighting (ICW) method (see Appendix P.2). I also run the analysis for each of the component measures separately and present those results in the main text.

As a final check, the Kaiser-Meyer-Olkin test (see Figure 19) of the suitability of using the PCA approach confirms that the sample is adequate to justify the use of the indices in place of the original component variables. The fact that all variables show a value of greater than 0.50 (rounded) justifies the use of PCA.

Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	kmo
partyagents	<b>0.7089</b>
family	<b>0.7471</b>
women	<b>0.6190</b>
youth	<b>0.5694</b>
all_ppl	<b>0.5219</b>
coethnics	<b>0.7889</b>
coreligion	<b>0.7778</b>
coclan	<b>0.8229</b>
disabled	<b>0.4956</b>
Overall	<b>0.7310</b>

Figure 19: KMO measure of sampling adequacy.

### Principal components (eigenvectors)

Variable	Comp1	Comp2	Comp3	Unexplained
partyagents	<b>0.3223</b>	<b>-0.3349</b>	<b>-0.4573</b>	<b>.2865</b>
family	<b>0.3490</b>	<b>-0.2131</b>	<b>-0.3485</b>	<b>.4227</b>
women	<b>0.2081</b>	<b>0.4600</b>	<b>0.1917</b>	<b>.5058</b>
youth	<b>0.1697</b>	<b>0.5889</b>	<b>0.1375</b>	<b>.3652</b>
all_ppl	<b>0.1256</b>	<b>-0.4120</b>	<b>0.5727</b>	<b>.3519</b>
coethnics	<b>0.4543</b>	<b>0.0363</b>	<b>0.1448</b>	<b>.3287</b>
coreligion	<b>0.4892</b>	<b>-0.0071</b>	<b>0.1288</b>	<b>.2319</b>
coclan	<b>0.4661</b>	<b>-0.0546</b>	<b>0.1653</b>	<b>.2856</b>
disabled	<b>0.1532</b>	<b>0.3317</b>	<b>-0.4700</b>	<b>.5297</b>

Figure 20: Correlation between the three underlying components and the original (trace) variables.

On the whole, Figure 20 suggests two major underlying relationships in the trace elements that fall within Component 1 and Component 2. By contrast, much of uniqueness in Component 3 seems to be driven by the single trace element measuring the intent to prioritize ‘all people in the community.’ For this reason, I focus on Component 1 and Component 2 as the main indices representing two different approaches to representing constituent groups. In the case of Component 1, there is a clear strong and positive correlation across the preference for prioritizing party agents, self/friends/family, coethnics, members of the same religion, and members of the same clan. These in-group constituents together suggest a preference for clientelistic representation whereby the candidate seeks to prioritize benefits for those with whom they share membership in salient social groups rather than the population more broadly. In the case of Component 2, there is a clear strong and positive association between

women, youth, and – to a lesser extent – the disabled or physically vulnerable. This suggests that Component 2 represents a preference for prioritizing the needs of broader constituent groups, and in particular those that are historically marginalized from accessing clientelistic networks by the gendered division of labor in Uganda (i.e. gender, domestic labor, care-taking, etc.). Consequently, these two component indices enter the analysis as the main dependent variables of interest for gauging differences in women candidates' representation priorities conditional on the level of electoral competition.

## APPENDIX M

### SUMMARY STATISTICS

This appendix provides summary statistics for all variables used in the analysis. Specifically, Table 32 presents summary statistics for all main outcome measures used in the analysis (constituent groups to prioritize for representation) and Table 33 presents summary statistics for all covariates generated from the survey data and used as controls (Panel A). For the control variables, the summary statistics presented in Table 33 are based on the data prior to imputing missing values using 10 rounds of predictive mean matching via the ‘ice’ command in STATA (discussed in detail in Appendix N).

Table 32: Summary statistics for main dependent variables.

	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Count</i>	<i>Missing (%)</i>
Client representation index, PCA (continuous)	0.00	1.78	-1.60	5.56	157	0
Client representation index, PCA (median-cut)	0.48	0.50	0	1	157	0
Top 3: Party agents	0.29	0.46	0	1	157	0
Top 3: Self, family, friends	0.22	0.42	0	1	157	0
Top 3: Coethnics	0.15	0.35	0	1	157	0
Top 3: Same religion	0.11	0.31	0	1	157	0
Top 3: Same clan	0.12	0.33	0	1	157	0
Women’s representation index, PCA (continuous)	0.00	1.23	-2.60	2.27	157	0
Women’s representation index, PCA (median-cut)	0.48	0.50	0	1	157	0
Top 3: Women	0.47	0.50	0	1	157	0
Top 3: Youth	0.54	0.50	0	1	157	0
Top 3: Disabled/physically vulnerable	0.43	0.50	0	1	157	0
Top 3: All people in the community	0.62	0.49	0	1	157	0



Table 33 also includes summary statistics in Panel B for additional control variables gathered from district-level census data (Ugandan Census 2014). I include these measures to check the sensitivity of candidates' priorities to the broader district context since this could influence the types of groups candidates are most likely to prioritize. In Appendix P, I check the sensitivity of my main results to accounting for higher levels of gender inequality, poverty/food scarcity, access to clean water, and electricity coverage which could proxy for the level of development in the candidate's constituency overall. The main effects with respect to competition are generally robust to the inclusion of these additional controls.

Table 33: Summary statistics for control variables prior to imputation, includes missingness.

	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Count</i>	<i>Missing (%)</i>
<b>Panel A: Candidate Characteristics</b>						
NRM candidate	0.73	0.44	0	1	157	0%
Spouse is politically connected	0.31	0.47	0	1	140	11%
Age	42.71	9.66	21	75	154	2%
Married	0.71	0.45	0	1	154	2%
Member of common religion	0.66	0.48	0	1	154	2%
Member of common ethnicity	0.79	0.41	0	1	156	1%
Education index	0.00	1.00	-2.97	2.38	144	8%
Highest level of education completed	2.09	1.30	0	7	152	3%
Literacy level	1.67	0.55	0	2	153	3%
English fluency	1.39	0.61	0	2	151	4%
Subjective HH income*	2.09	0.86	1	4	120	24%
HH income relative to others in constituency*	3.59	0.91	1	5	121	23%
HH dependents under age 13	2.72	1.79	0	9	149	5%
LC3 (subcounty) candidate	0.67	0.47	0	1	157	0%
LC4 (municipal) candidate	0.06	0.23	0	1	157	0%
LC5 (district) candidate	0.27	0.45	0	1	157	0%
<b>Panel B: District Characteristics</b>						
Proxy index of gender inequality	0.00	1.00	-0.48	2.68	157	0%
Share of girl children married, age 10-17	0.13	0.20	0.04	0.65	157	0%
Share of girl children w/ children, age 12-17	0.16	0.19	0.06	0.67	157	0%
Share of HHs w/ less than 2 meals per day	7.99	1.49	5.90	11.80	157	0%
Share of HHs w/ electricity	0.17	0.07	0.09	0.34	157	0%
Share of HHs w/ protected drinking water	0.52	0.13	0.17	0.73	157	0%

\*The missingness is higher in these variables because they come from the post-training survey which was not administered in Kasese or Kabarole. Without these two districts, the total sample size is 134 and both of these variables are only missing for 10% of the surveys. In those 8 districts that completed a post-training survey, the mean for the unimputed data for 'subjective HH income' is 2.09 (sd=0.86) and the mean for the imputed data for 'relative HH income' is 3.59 (sd=0.91).

## APPENDIX N

### IMPUTATION OF MISSING COVARIATES

To address item-level missingness in the covariates used for analysis, I performed 10 rounds of missing data imputation using multivariate imputation via chained equations using the ‘ice’ command package in STATA. I excluded any variables with a high degree of item non-response (more than 15% missing). Table 34 shows the summary statistics for all controls included in the analysis following imputation though not all of these variables appear in the models in the main text. Some are included in the sensitivity analysis in Appendix P.

As the key independent variable (average margin of victory in 2011), was assigned at the constituency level, I was not able to include constituency dummy variables in the chained equations due to collinearity with the main independent variable by construction. Instead, I included the set of district dummy variable indicators, dummies for the level of office contested (LC3, LC4, and LC5), and dummies for political party membership (NRM, FDC, or IND) in the system of chained equations for predictive mean matching. These indicators were included along with representation priorities (all binary), outcome of the 2016 election (binary variable where 1 = winner and 0 = loser), member of majority ethnic group (binary), member of majority religion (binary), marital status (binary), age (continuous), household dependents under age 13 (continuous), level of education (ordered categorical), literacy (ordered categorical), English fluency (ordered categorical), party leader influence over candidacy (ordered categorical), spousal political networks (binary), attitudes toward women representatives (ordered categorical), relative trust in women representatives to serve

Table 34: Summary statistics for control variables after imputation.

	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>N</i>
NRM candidate	0.73	0.44	0	1	157
Age	42.75	9.67	21	75	157
Married	0.71	0.45	0	1	157
Member of common religion	0.66	0.47	0	1	157
Member of common ethnicity	0.79	0.40	0	1	157
Education index	0.00	1.00	-2.97	2.38	157
Highest level of education completed	2.08	1.29	0	7	157
Literacy level	1.67	0.55	0	2	157
English fluency	1.39	0.61	0	2	157
Subjective HH income*	2.20	0.96	1	4	157
HH income relative to others in constituency*	3.56	0.95	1	5	157
HH dependents under age 13	2.71	1.81	0	9	157
Recruited to run by party leaders	2.00	1.30	1	4	157
Spouse is politically connected	0.31	0.46	0	1	157
Relative trust in women reps index	0.00	1.00	-3.84	0.59	157
Trust women more than men to help community	3.55	0.84	1	4	157
Trust women more than men to help women	3.64	0.76	1	4	157
Women reps more informed about women's needs	3.25	1.03	1	4	157
LC3 (subcounty) candidate	0.67	0.47	0	1	157
LC4 (municipal) candidate	0.06	0.23	0	1	157
LC5 (district) candidate	0.27	0.45	0	1	157

\*The majority of the missingness for these two variables is due to the lack of a post-training survey being completed in either Kasese or Kabarole district. In the 8 districts that do contain data for these two measures, the mean for the imputed data for 'subjective HH income' is 2.15 (*sd*=0.91) and the mean for the imputed data for 'relative HH income' is 3.56 (*sd*=0.93).

women (ordered categorical), relative trust in women representatives to serve community overall (ordered categorical), subjective household income (ordered categorical), subjective

relative household income (ordered categorical), and electoral competition (the key independent variable; continuous average margin of victory in 2011).

## APPENDIX O

### ORDINARY LEAST SQUARES REGRESSION RESULTS

This section contains the regression output for five different model specifications used to evaluate the relationship between the level of electoral competition and candidates' representation priorities (measured as indices of client representation and women's representation). Model 1 is the bivariate regression; Model 2 includes the full slate of controls (the main specification presented in the text); Model 3 includes controls plus constituency fixed effects; Model 4 includes controls plus district fixed effects; and, Model 5 includes the original set of controls plus four additional control variables measured at the district level.

Table 35: Main regression of competition predicting clientelistic groups index, constituency clustered standard errors.

	<b>Model 1</b> <i>no controls</i>	<b>Model 2</b> <i>controls</i>	<b>Model 3</b> <i>controls + const. FEs</i>	<b>Model 4</b> <i>controls + district FEs</i>	<b>Model 5</b> <i>controls + district factors</i>
<i>Average margin of victory</i>	0.02** (0.01) 0.040	0.02* (0.01) 0.065	0.09*** (0.02) 0.000	0.00 (0.01) 0.867	0.02 (0.01) 0.107
<i>Affiliated with the NRM</i>		-0.11 (0.28) 0.697	0.32 (0.29) 0.288	0.51 (0.31) 0.118	-0.10 (0.29) 0.745
<i>Spousal political networks</i>		0.06 (0.41) 0.884	0.15 (0.35) 0.680	0.30 (0.35) 0.412	0.17 (0.38) 0.661
<i>Age</i>		0.01 (0.02) 0.786	0.00 (0.02) 0.881	0.00 (0.02) 0.804	0.00 (0.02) 0.875
<i>Candidate is married</i>		-0.20 (0.25) 0.414	-0.64* (0.34) 0.074	-0.47* (0.28) 0.100	-0.17 (0.25) 0.505
<i>Member of dominant religious group in region</i>		-0.27 (0.30) 0.368	-0.35 (0.35) 0.332	-0.15 (0.31) 0.625	-0.23 (0.31) 0.462
<i>Member of dominant ethnic group in district</i>		-0.11 (0.40) 0.79	0.17 (0.31) 0.598	-0.05 (0.31) 0.874	-0.23 (0.40) 0.577
<i>Education index</i>		0.00 (0.14) 0.976	-0.13 (0.14) 0.364	-0.21 (0.15) 0.165	-0.12 (0.13) 0.359
<i>Subjective HH monthly income</i>		0.09 (0.17) 0.609	-0.05 (0.21) 0.814	-0.03 (0.21) 0.873	-0.02 (0.21) 0.918
<i>Subjective relative HH well-being</i>		-0.13 (0.17) 0.455	-0.14 (0.20) 0.496	-0.11 (0.17) 0.535	-0.07 (0.16) 0.683
<i>HH dependents under age 13</i>		0.13 (0.10) 0.202	0.09 (0.09) 0.316	0.13 (0.08) 0.135	0.12 (0.10) 0.247
<i>LC5 Candidate</i>		0.43 (0.42) 0.306	0.16 (0.61) 0.800	0.01 (0.46) 0.982	0.31 (0.46) 0.506
<i>District gender inequality index</i>					-0.53*** (0.18) 0.007
<i>Share of HHs with &lt;2 meals/day</i>					0.53 (0.31) 0.101
<i>Share of HHs with electricity</i>					-6.73 (4.97) 0.188
<i>Share of HHs with protected drinking water</i>					5.99 (3.79) 0.127
<i>Constant</i>	-1.41 (0.57) 0.020	-1.54 (1.42) 0.291	-5.79 (2.43) 0.027	0.04 (1.53) 0.978	-7.36 (4.56) 0.120
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.

Table 36: Main regression of competition predicting clientelistic groups index, robust standard errors.

	<b>Model 1</b> <i>no controls</i>	<b>Model 2</b> <i>controls</i>	<b>Model 3</b> <i>controls + const. FEs</i>	<b>Model 4</b> <i>controls + district FEs</i>	<b>Model 5</b> <i>controls + district factors</i>
<i>Average margin of victory</i>	0.02** (0.01) 0.010	0.02** (0.01) 0.024	0.09*** (0.03) 0.001	0.00 (0.01) 0.885	0.02** (0.01) 0.034
<i>Affiliated with the NRM</i>		-0.11 (0.29) 0.704	0.32 (0.37) 0.392	0.51 (0.38) 0.179	-0.10 (0.34) 0.780
<i>Spousal political networks</i>		0.06 (0.39) 0.878	0.15 (0.35) 0.672	0.30 (0.35) 0.396	0.17 (0.38) 0.656
<i>Age</i>		0.01 (0.02) 0.714	0.00 (0.02) 0.843	0.00 (0.02) 0.749	0.00 (0.02) 0.843
<i>Candidate is married</i>		-0.20 (0.29) 0.478	-0.64** (0.32) 0.047	-0.47* (0.27) 0.085	-0.17 (0.29) 0.560
<i>Member of dominant religious group in region</i>		-0.27 (0.33) 0.413	-0.35 (0.31) 0.265	-0.15 (0.29) 0.606	-0.23 (0.34) 0.495
<i>Member of dominant ethnic group in district</i>		-0.11 (0.36) 0.767	0.17 (0.33) 0.612	-0.05 (0.33) 0.879	-0.23 (0.38) 0.556
<i>Education index</i>		0.00 (0.13) 0.974	-0.13 (0.17) 0.429	-0.21 (0.16) 0.191	-0.12 (0.15) 0.417
<i>Subjective HH monthly income</i>		0.09 (0.18) 0.622	-0.05 (0.22) 0.819	-0.03 (0.22) 0.876	-0.02 (0.21) 0.917
<i>Subjective relative HH well-being</i>		-0.13 (0.17) 0.452	-0.14 (0.19) 0.452	-0.11 (0.18) 0.557	-0.07 (0.18) 0.711
<i>HH dependents under age 13</i>		0.13 (0.10) 0.199	0.09 (0.09) 0.318	0.13 (0.09) 0.128	0.12 (0.10) 0.228
<i>LC5 Candidate</i>		0.43 (0.41) 0.287	0.16 (0.47) 0.740	0.01 (0.41) 0.980	0.31 (0.44) 0.473
<i>District gender inequality index</i>					-0.53*** (0.17) 0.002
<i>Share of HHs with &lt;2 meals/day</i>					0.53** (0.26) 0.040
<i>Share of HHs with electricity</i>					-6.73* (3.91) 0.088
<i>Share of HHs with protected drinking water</i>					5.99** (2.86) 0.038
<i>Constant</i>	-1.41 (0.48) 0.004	-1.54 (1.04) 0.143	-5.79 (2.23) 0.011	0.04 (1.36) 0.975	-7.36 (3.22) 0.024
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include robust standard errors.

Table 37: Main regression of competition predicting marginalized groups index, constituency clustered standard errors.

	Model 1 <i>no controls</i>	Model 2 <i>controls</i>	Model 3 <i>controls + const. FEs</i>	Model 4 <i>controls + district FEs</i>	Model 5 <i>controls + district factors</i>
<i>Average margin of victory</i>	0.00 (0.01) 0.728	0.00 (0.01) 0.985	-0.26*** (0.01) 0.000	-0.01 (0.01) 0.302	0.00 (0.01) 0.712
<i>Affiliated with the NRM</i>		0 (0.26) 0.986	0.17 (0.27) 0.525	0.19 (0.26) 0.470	0.18 (0.23) 0.429
<i>Spousal political networks</i>		-0.11 (0.20) 0.579	-0.11 (0.26) 0.667	0.02 (0.21) 0.921	0.02 (0.21) 0.917
<i>Age</i>		0.01 (0.01) 0.395	0.01 (0.01) 0.536	0.01 (0.01) 0.650	0.00 (0.01) 0.836
<i>Candidate is married</i>		-0.25 (0.23) 0.287	0.11 (0.19) 0.563	-0.09 (0.20) 0.674	-0.15 (0.20) 0.480
<i>Member of dominant religious group in region</i>		-0.02 (0.21) 0.926	0.18 (0.19) 0.351	0.06 (0.20) 0.751	0.06 (0.20) 0.756
<i>Member of dominant ethnic group in district</i>		0.23 (0.29) 0.440	0.03 (0.31) 0.919	-0.05 (0.28) 0.848	-0.07 (0.26) 0.795
<i>Education index</i>		0.30** (0.13) 0.033	0.11 (0.12) 0.357	0.13 (0.10) 0.217	0.16 (0.10) 0.136
<i>Subjective HH monthly income</i>		-0.16 (0.13) 0.237	-0.11 (0.13) 0.429	-0.17 (0.12) 0.187	-0.14 (0.11) 0.212
<i>Subjective relative HH well-being</i>		-0.07 (0.12) 0.590	0.00 (0.11) 0.973	-0.04 (0.10) 0.697	-0.03 (0.09) 0.759
<i>HH dependents under age 13</i>		0.04 (0.05) 0.404	0.13** (0.05) 0.021	0.07 (0.05) 0.184	0.06 (0.05) 0.279
<i>LC5 Candidate</i>		-0.01 (0.20) 0.961	-0.10 (0.24) 0.684	0.03 (0.22) 0.884	0.02 (0.19) 0.939
<i>District gender inequality index</i>					-0.65*** (0.07) 0.000
<i>Share of HHs with &lt;2 meals/day</i>					0.03 (0.08) 0.740
<i>Share of HHs with electricity</i>					-7.44*** (2.52) 0.007
<i>Share of HHs with protected drinking water</i>					3.17** (1.17) 0.013
<i>Constant</i>	0.20 (0.60) 0.741	0.09 (0.87) 0.916	17.64 (1.06) 0.000	0.89 (0.73) 0.235	-0.25 (1.26) 0.846
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.



Table 38: Main regression of competition predicting marginalized groups index, robust standard errors.

	<b>Model 1</b> <i>no controls</i>	<b>Model 2</b> <i>controls</i>	<b>Model 3</b> <i>controls + const. FEs</i>	<b>Model 4</b> <i>controls + district FEs</i>	<b>Model 5</b> <i>controls + district factors</i>
<i>Average margin of victory</i>	0.00 (0.01) 0.601	0.00 (0.01) 0.982	-0.26*** (0.02) 0.000	-0.01 (0.01) 0.302	0.00 (0.01) 0.665
<i>Affiliated with the NRM</i>		0.00 (0.25) 0.985	0.17 (0.28) 0.540	0.19 (0.27) 0.486	0.18 (0.24) 0.450
<i>Spousal political networks</i>		-0.11 (0.23) 0.625	-0.11 (0.25) 0.652	0.02 (0.23) 0.926	0.02 (0.23) 0.922
<i>Age</i>		0.01 (0.01) 0.351	0.01 (0.01) 0.476	0.01 (0.01) 0.629	0.00 (0.01) 0.829
<i>Candidate is married</i>		-0.25 (0.24) 0.317	0.11 (0.24) 0.645	-0.09 (0.23) 0.704	-0.15 (0.22) 0.508
<i>Member of dominant religious group in region</i>		-0.02 (0.20) 0.925	0.18 (0.20) 0.363	0.06 (0.20) 0.753	0.06 (0.19) 0.746
<i>Member of dominant ethnic group in district</i>		0.23 (0.26) 0.383	0.03 (0.24) 0.894	-0.05 (0.21) 0.802	-0.07 (0.22) 0.748
<i>Education index</i>		0.30** (0.12) 0.012	0.11 (0.12) 0.341	0.13 (0.11) 0.234	0.16 (0.11) 0.145
<i>Subjective HH monthly income</i>		-0.16 (0.13) 0.218	-0.11 (0.13) 0.417	-0.17 (0.13) 0.184	-0.14 (0.12) 0.237
<i>Subjective relative HH well-being</i>		-0.07 (0.12) 0.577	0.00 (0.12) 0.976	-0.04 (0.11) 0.732	-0.03 (0.10) 0.795
<i>HH dependents under age 13</i>		0.04 (0.05) 0.423	0.13** (0.06) 0.019	0.07 (0.05) 0.181	0.06 (0.05) 0.247
<i>LC5 Candidate</i>		-0.01 (0.25) 0.969	-0.1 (0.23) 0.674	0.03 (0.24) 0.893	0.02 (0.23) 0.949
<i>District gender inequality index</i>					-0.65*** (0.10) 0.000
<i>Share of HHs with &lt;2 meals/day</i>					0.03 (0.13) 0.837
<i>Share of HHs with electricity</i>					-7.44*** (2.39) 0.002
<i>Share of HHs with protected drinking water</i>					3.17* (1.72) 0.068
<i>Constant</i>	0.20 (0.39) 0.612	0.09 (0.67) 0.890	17.64 (1.29) 0.000	0.89 (0.87) 0.308	-0.25 (1.71) 0.885
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include robust standard errors.

## APPENDIX P

### SENSITIVITY ANALYSIS

In this section, I evaluate the sensitivity of the results to restricting the analysis to the subsample of observations where the candidate is fluent in English ( $n = 69$ ). I also evaluate the sensitivity of the results to an alternative specification of the indices of representation priorities. As in the previous section, I present five different model specifications to check the robustness of the relationship between electoral competition and constituent groups candidates intend to prioritize. Model 1 is the bivariate regression; Model 2 includes the full slate of controls; Model 3 includes controls plus constituency fixed effects; Model 4 includes controls plus district fixed effects; and, Model 5 includes the original set of controls plus four additional control variables measured at the district level. For each dependent variable of interest, I present all results using standard errors clustered at the constituency level.

#### P.1 ENGLISH FLUENCY

One concern with the quality of the survey data relates to the fact that the survey was self-administered and printed in English, yet not all women who attended the trainings were fluent in English. The extent of this potential barrier to generating reliable responses to the survey questions was not clear until after implementation was completed. Workshop

staff were instructed to help clarify any questions respondents had as to the meaning of individual questions, translating into the relevant local language as needed. Given the length and complexity of some of the questions, the extent to which this was sufficient to generate high quality data is somewhat questionable. However, since the survey contained a question regarding English fluency, it is possible to identify the respondents who self-identified as ‘fluent’ in English. By isolating the effect of competition on representation priorities for this subset of 69 women candidates, it may be possible to arrive at more reliable estimates.

Table 39 shows the effect of competition on the level of clientelistic group priorities. Compared to the same estimation conducted for the full sample, the coefficients in Models 1 and 2 and Models 4 and 5 are very similar – as the margin of victory increases, I observe a significant and positive increase in the clientelistic group priorities index (Models 1 and 2), while I do not find a significant effect if district fixed effects are included (Model 4) and note a weakly positive effect if observable district level factors are taken into account (Model 5). The coefficient for competition in Model 3 is noticeably different in this specification, though it is not immediately obvious why this might be the case. I also observe roughly similar results in Table 40 as for the full sample, at least in the case of the null effect of competition on the marginalized groups index. Again, I note that Model 3 is an outlier in this case, with strikingly different results for the full sample compared to the English-speaking subsample.

The most notable difference between those who speak English fluently and those who do not is in terms of the other independent variables included in the analysis. Among English-speakers, the negative effect of being married on clientelistic representation is much more pronounced than in the main results in Appendix O. I also observe increased precision in some of the other control variables. As the number of household dependents under age 13 increases, there is an increase in the clientelistic index. In predicting the score on the marginalized groups index, I also note that some of the alternative model specifications show a positive effect of NRM membership. This suggests that limiting the sample to those who speak English increases precision and reduces noise in the results for the control variables, but it still yields a similar pattern with respect to the influence of the competitiveness of the

electoral environment.

Another notable difference in the English-speaking subsample relates to the district-level control variables in Model 5. In the subsample, none of these coefficients are significant in predicting the clientelistic groups index, though three out of four of them are in predicting the marginalized groups index. This contrasts with the full sample, where district-level gender inequality is significantly and negatively related to clientelistic representation and poverty/food scarcity is significant and positively related to the client groups index, while the remaining two variables are insignificant. At the same time, the direction and significance of these variables in relation to the marginalized groups index is consistent across the full sample and the subsample. The higher gender inequality is, the lower the support for prioritizing the marginalized groups index. The more households with electricity, the lower the support for marginalized groups' priorities. The more households with clean drinking water, the greater the support for marginalized groups. Given that clean water and electricity may both be measures of the level of development in the district, it is difficult to interpret the opposing findings here.

Table 39: Clientelistic groups index among candidates fluent in English.

	Model 1 <i>no controls</i>	Model 2 <i>controls</i>	Model 3 <i>controls + const. FEs</i>	Model 4 <i>controls + district FEs</i>	Model 5 <i>controls + district factors</i>
<i>Average margin of victory</i>	0.02** (0.01) 0.042	0.03** (0.01) 0.048	-0.07 (0.07) 0.361	0.00 (0.01) 0.871	0.03 (0.02) 0.108
<i>Affiliated with the NRM</i>		-0.43 (0.44) 0.345	-0.42 (0.44) 0.350	-0.33 (0.45) 0.467	-0.51 (0.43) 0.250
<i>Spousal political networks</i>		0.50 (0.51) 0.339	0.13 (0.72) 0.854	0.18 (0.53) 0.744	0.42 (0.50) 0.415
<i>Age</i>		0.01 (0.02) 0.523	0.02 (0.03) 0.478	0.03 (0.03) 0.330	0.02 (0.02) 0.389
<i>Candidate is married</i>		-0.55 (0.34) 0.131	-0.87 (0.51) 0.106	-0.76* (0.38) 0.060	-0.74* (0.36) 0.058
<i>Member of dominant religious group in region</i>		-0.66 (0.51) 0.218	-0.43 (0.81) 0.603	-0.57 (0.60) 0.352	-0.83 (0.59) 0.175
<i>Member of dominant ethnic group in district</i>		-0.43 (0.38) 0.281	-0.02 (0.64) 0.971	-0.17 (0.43) 0.693	-0.23 (0.46) 0.628
<i>Subjective HH monthly income</i>		0.11 (0.17) 0.537	0.00 (0.35) 0.997	0.00 (0.24) 0.997	0.03 (0.20) 0.898
<i>Subjective relative HH well-being</i>		-0.11 (0.28) 0.706	-0.16 (0.57) 0.776	-0.16 (0.40) 0.695	-0.07 (0.35) 0.834
<i>HH dependents under age 13</i>		0.25* (0.14) 0.099	0.20 (0.17) 0.255	0.24 (0.13) 0.110	0.21 (0.13) 0.143
<i>LC5 Candidate</i>		0.03 (0.45) 0.943	-0.32 (0.60) 0.597	-0.27 (0.39) 0.500	0.01 (0.47) 0.984
<i>District gender inequality index</i>					0.01 (0.14) 0.949
<i>Share of HHs with &lt;2 meals/day</i>					0.02 (0.24) 0.940
<i>Share of HHs with electricity</i>					2.92 (3.88) 0.462
<i>Share of HHs with protected drinking water</i>					-3.11 (2.12) 0.159
<i>Constant</i>	-1.67 (0.69) 0.026	-1.93 (2.06) 0.363	4.88 (6.24) 0.454	-0.27 (2.52) 0.915	-0.71 (4.79) 0.883
<i>N</i>	69	69	69	69	69

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.

Table 40: Marginalized groups index among candidates fluent in English.

	Model 1 <i>no controls</i>	Model 2 <i>controls</i>	Model 3 <i>controls + const. FEs</i>	Model 4 <i>controls + district FEs</i>	Model 5 <i>controls + district factors</i>
<i>Average margin of victory</i>	-0.01 (0.01) 0.545	0.00 (0.01) 0.780	-0.01 (0.08) 0.943	-0.01 (0.01) 0.418	-0.01 (0.01) 0.246
<i>Affiliated with the NRM</i>		0.11 (0.30) 0.711	0.59* (0.28) 0.052	0.56** (0.25) 0.038	0.34 (0.25) 0.198
<i>Spousal political networks</i>		0.07 (0.34) 0.833	0.49 (0.50) 0.347	0.37 (0.41) 0.380	0.09 (0.38) 0.810
<i>Age</i>		0.02 (0.01) 0.146	0.00 (0.02) 0.868	0.00 (0.02) 0.786	0.01 (0.01) 0.335
<i>Candidate is married</i>		-0.35 (0.28) 0.229	0.07 (0.40) 0.859	-0.11 (0.31) 0.720	-0.12 (0.28) 0.667
<i>Member of dominant religious group in region</i>		-0.34 (0.26) 0.214	0.15 (0.23) 0.516	0.01 (0.22) 0.980	0.10 (0.21) 0.633
<i>Member of dominant ethnic group in district</i>		0.16 (0.44) 0.719	-0.41 (0.50) 0.427	-0.20 (0.38) 0.605	-0.28 (0.37) 0.469
<i>Subjective HH monthly income</i>		-0.25 (0.22) 0.267	-0.30 (0.34) 0.387	-0.18 (0.24) 0.459	-0.18 (0.19) 0.367
<i>Subjective relative HH well-being</i>		0.05 (0.20) 0.827	-0.01 (0.24) 0.976	-0.10 (0.19) 0.613	-0.07 (0.15) 0.672
<i>HH dependents under age 13</i>		0.10 (0.06) 0.149	0.16** (0.07) 0.04	0.12* (0.07) 0.097	0.15** (0.06) 0.036
<i>LC5 Candidate</i>		0.06 (0.23) 0.807	0.24 (0.32) 0.454	0.11 (0.22) 0.626	0.08 (0.20) 0.689
<i>District gender inequality index</i>					-0.74*** (0.26) 0.010
<i>Share of HHs with &lt;2 meals/day</i>					-0.06 (0.10) 0.562
<i>Share of HHs with electricity</i>					-9.02*** (2.42) 0.002
<i>Share of HHs with protected drinking water</i>					4.15** (1.56) 0.019
<i>Constant</i>	0.71 (0.71) 0.325	0.09 (1.09) 0.934	1.25 (6.26) 0.845	1.73 (1.26) 0.190	0.57 (2.10) 0.788
<i>N</i>	69	69	69	69	69

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.

## P.2 ALTERNATIVE DEPENDENT VARIABLES USING INVERSE COVARIANCE WEIGHTING

Following [Anderson \(2008\)](#), I also collapse multiple survey questions into a single index where different questions help explain a common underlying concept. Known as inverse covariance weighting (ICW), this method assumes one latent trait of interest and constructs an optimal weighted average by weighting-up index components that have lower covariance and thus provide more ‘new’ information.

To create the ICW indices, I first checked the correlation of the nine original variables included in the principal component analysis of representation priorities. The results showed a strong correlation between party agents, family/friends, and members of the same religious, ethnic, and tribal groups. They also revealed a strong positive correlation between women and youth/children, while ‘all people’ remained largely independent of the other measures. Disabled or physically vulnerable did not correlate strongly with any of the other measures, so I removed it from consideration in creating the ICW indices. I then created two indices, grouping the variables in keeping with the high levels of correlation between them.

As in the previous section, I present five different model specifications to check the robustness of the relationship between electoral competition and constituent groups candidates intend to prioritize. Model 1 is the bivariate regression; Model 2 includes the full slate of controls; Model 3 includes controls plus constituency fixed effects; Model 4 includes controls plus district fixed effects; and, Model 5 includes the original set of controls plus four additional control variables measured at the district level. For each dependent variable of interest, I present all results using standard errors clustered at the constituency level. Overall, the results are generally consistent with the estimation that uses the PCA indices as the main dependent variables. This suggests that the results with respect to how the level of electoral competition influences representation priorities is not especially sensitive to how the index versions of the dependent variables are created.

Table 41: ICW results for the clientelistic groups index with clustered standard errors.

	Model 1 <i>no controls</i>	Model 2 <i>controls</i>	Model 3 <i>controls + const. FEs</i>	Model 4 <i>controls + district FEs</i>	Model 5 <i>controls + district factors</i>
<i>Average margin of victory</i>	0.01** (0.01) 0.039	0.01* (0.01) 0.065	0.12*** (0.01) 0.000	0.00 (0.00) 0.510	0.01* (0.01) 0.072
<i>Affiliated with the NRM</i>		-0.09 (0.19) 0.64	0.14 (0.18) 0.441	0.24 (0.18) 0.190	-0.12 (0.20) 0.554
<i>Spousal political networks</i>		-0.02 (0.24) 0.937	0.03 (0.21) 0.872	0.09 (0.20) 0.674	0.02 (0.23) 0.938
<i>Age</i>		0.00 (0.01) 0.929	0.00 (0.01) 0.744	0.00 (0.01) 0.702	0.00 (0.01) 0.830
<i>Candidate is married</i>		0.01 (0.15) 0.968	-0.31* (0.18) 0.091	-0.19 (0.14) 0.191	0.00 (0.15) 0.998
<i>Member of dominant religious group in region</i>		-0.13 (0.16) 0.418	-0.22 (0.18) 0.244	-0.07 (0.16) 0.666	-0.13 (0.17) 0.463
<i>Member of dominant ethnic group in district</i>		-0.08 (0.21) 0.698	0.11 (0.15) 0.472	0.00 (0.15) 0.979	-0.09 (0.22) 0.695
<i>Education Index</i>		-0.06 (0.09) 0.516	-0.09 (0.09) 0.341	-0.14 (0.09) 0.106	-0.10 (0.09) 0.256
<i>Subjective HH monthly income</i>		0.12 (0.11) 0.28	0.04 (0.13) 0.737	0.05 (0.12) 0.681	0.05 (0.13) 0.700
<i>Subjective relative HH well-being</i>		-0.08 (0.10) 0.476	-0.10 (0.12) 0.431	-0.07 (0.10) 0.477	-0.04 (0.10) 0.682
<i>HH dependents under age 13</i>		0.06 (0.05) 0.288	0.02 (0.05) 0.745	0.05 (0.04) 0.269	0.05 (0.06) 0.404
<i>LC5 Candidate</i>		0.27 (0.22) 0.244	0.13 (0.33) 0.699	0.02 (0.25) 0.948	0.19 (0.25) 0.444
<i>District gender inequality index</i>					-0.17 (0.10) 0.113
<i>Share of HHs with &lt;2 meals/day</i>					0.30* (0.17) 0.087
<i>Share of HHs with electricity</i>					-1.95 (2.73) 0.481
<i>Share of HHs with protected drinking water</i>					2.69 (2.08) 0.207
<i>Constant</i>	-0.86 (0.37) 0.030	-0.96 (0.77) 0.228	-7.97 (1.31) 0.000	-0.19 (0.76) 0.804	-4.30 (2.40) 0.086
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.



Table 42: ICW results for the marginalized groups index with clustered standard errors.

	Model 1 <i>no controls</i>	Model 2 <i>controls</i>	Model 3 <i>controls + const. FEs</i>	Model 4 <i>controls + district FEs</i>	Model 5 <i>controls + district factors</i>
<i>Average margin of victory</i>	0.00 (0.01) 0.507	0.00 (0.01) 0.709	-0.19*** (0.01) 0.000	-0.01 (0.01) 0.179	0.00 (0.01) 0.521
<i>Affiliated with the NRM</i>		0.07 (0.20) 0.725	0.16 (0.25) 0.535	0.18 (0.24) 0.453	0.15 (0.19) 0.443
<i>Spousal political networks</i>		-0.08 (0.19) 0.694	-0.04 (0.21) 0.864	0.04 (0.18) 0.831	0.02 (0.17) 0.895
<i>Age</i>		0.01 (0.01) 0.534	0.01 (0.01) 0.458	0.00 (0.01) 0.668	0.00 (0.01) 0.859
<i>Candidate is married</i>		-0.19 (0.21) 0.367	-0.06 (0.18) 0.733	-0.07 (0.18) 0.715	-0.12 (0.19) 0.554
<i>Member of dominant religious group in region</i>		-0.15 (0.17) 0.404	-0.04 (0.19) 0.816	-0.07 (0.17) 0.703	-0.08 (0.17) 0.647
<i>Member of dominant ethnic group in district</i>		0.20 (0.25) 0.437	0.09 (0.29) 0.761	0.05 (0.25) 0.850	0.00 (0.23) 0.983
<i>Education Index</i>		0.28*** (0.07) 0.001	0.12 (0.08) 0.138	0.13* (0.07) 0.088	0.18*** (0.06) 0.009
<i>Subjective HH monthly income</i>		-0.04 (0.10) 0.734	-0.10 (0.10) 0.347	-0.10 (0.09) 0.292	-0.06 (0.09) 0.511
<i>Subjective relative HH well-being</i>		-0.13 (0.11) 0.237	-0.13 (0.11) 0.246	-0.11 (0.09) 0.251	-0.10 (0.07) 0.177
<i>HH dependents under age 13</i>		0.03 (0.05) 0.454	0.08 (0.05) 0.104	0.06 (0.04) 0.184	0.04 (0.04) 0.327
<i>LC5 Candidate</i>		0.09 (0.18) 0.612	0.03 (0.23) 0.897	0.02 (0.20) 0.936	0.04 (0.19) 0.836
<i>District gender inequality index</i>					-0.50*** (0.08) 0.000
<i>Share of HHs with &lt;2 meals/day</i>					0.26** (0.11) 0.030
<i>Share of HHs with electricity</i>					-7.91*** (2.15) 0.001
<i>Share of HHs with protected drinking water</i>					4.89*** (1.38) 0.002
<i>Constant</i>	0.33 (0.52) 0.537	0.39 (0.82) 0.641	14.14 (1.08) 0.000	0.85 (0.66) 0.211	-2.54 (1.64) 0.136
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.

### P.3 ADDITIONAL CONTROL VARIABLES

In this section, I confirm the robustness of the main results to the inclusion of additional control variables derived from the survey of women candidates. I again reproduce the five different model specifications to check the robustness of the relationship between electoral competition and constituent groups candidates intend to prioritize. Model 1 is the bivariate regression; Model 2 includes the full slate of controls plus the additional set of survey variables; Model 3 includes all controls in Model 2 plus constituency fixed effects; Model 4 includes all controls in Model 2 plus district fixed effects; and, Model 5 includes all controls in Model 2 plus four additional control variables measured at the district level. For each dependent variable of interest, I present all results first using standard errors clustered at the constituency level, followed by all five models with robust standard errors. Overall, the results are generally consistent with what I present in the main text.

Table 43: Main regression of competition predicting clientelistic groups index.

	Model 1 no controls	Model 2 controls	Model 3 controls + const. FEs	Model 4 controls + district FEs	Model 5 controls + district factors
<i>Avg. margin of victory 2011 (continuous)</i>	0.02** (0.01) 0.040	0.02** (0.01) 0.015	0.10*** (0.02) 0.000	0.00 (0.01) 0.879	0.02 (0.01) 0.103
<i>Affiliated with the NRM</i>		-0.01 (0.24) 0.955	0.36 (0.29) 0.227	0.55* (0.32) 0.098	-0.04 (0.26) 0.863
<i>Age</i>		0.01 (0.02) 0.817	-0.01 (0.02) 0.804	-0.01 (0.02) 0.796	-0.01 (0.02) 0.784
<i>Candidate is married</i>		-0.23 (0.28) 0.416	-0.68* (0.37) 0.077	-0.53 (0.32) 0.111	-0.23 (0.29) 0.443
<i>Member of dominant religious group in region</i>		-0.34 (0.28) 0.242	-0.43 (0.38) 0.267	-0.22 (0.32) 0.513	-0.26 (0.31) 0.420
<i>Member of dominant ethnic group in district</i>		-0.15 (0.38) 0.691	0.19 (0.29) 0.517	-0.05 (0.32) 0.882	-0.21 (0.39) 0.595
<i>Education index</i>		-0.01 (0.13) 0.921	-0.13 (0.15) 0.375	-0.2 (0.14) 0.174	-0.13 (0.13) 0.345
<i>Subjective HH monthly income</i>		0.05 (0.20) 0.820	-0.05 (0.23) 0.820	-0.05 (0.22) 0.835	-0.05 (0.23) 0.831
<i>Subjective HH well-being relative to others in constituency</i>		-0.12 (0.18) 0.525	-0.13 (0.20) 0.534	-0.1 (0.17) 0.570	-0.07 (0.17) 0.714
<i>HH dependents under age 13</i>		0.13 (0.10) 0.188	0.09 (0.09) 0.365	0.13 (0.09) 0.161	0.12 (0.10) 0.257
<i>Wouldn't run without party leaders asking</i>		-0.06 (0.15) 0.673	-0.08 (0.15) 0.587	-0.09 (0.12) 0.487	0.03 (0.15) 0.867
<i>Spouse has held office or served in party leadership</i>		0.09 (0.41) 0.834	0.18 (0.36) 0.633	0.33 (0.36) 0.363	0.21 (0.38) 0.585
<i>Trust in women candidates index</i>		0.06 (0.15) 0.702	0.15 (0.19) 0.442	0.09 (0.17) 0.629	0.13 (0.16) 0.437
<i>Women candidates more informed than male candidates</i>		-0.16 (0.22) 0.474	-0.17 (0.22) 0.436	-0.11 (0.21) 0.593	-0.19 (0.20) 0.371
<i>LC3 Candidate</i>		-0.43 (0.40) 0.299	-0.18 (0.58) 0.766	-0.01 (0.44) 0.988	-0.29 (0.43) 0.510
<i>District gender inequality index</i>					-0.55** (0.21) 0.016
<i>Share of HHs with less than 2 meals per day</i>					0.55* (0.31) 0.085
<i>Share of HHs with electricity</i>					-6.96 (5.16) 0.191
<i>Share of HHs with protected drinking water</i>					6.02 (3.87) 0.133
<i>Constant</i>	-1.39 (0.56) 0.019	-0.58 (2.07) 0.781	-5.71 (2.88) 0.062	0.66 (2.35) 0.780	-6.44 (5.17) 0.226
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.

Table 44: Main regression of competition predicting clientelistic groups index.

	Model 1 no controls	Model 2 controls	Model 3 controls + const. FEs	Model 4 controls + district FEs	Model 5 controls + district factors
<i>Avg. margin of victory 2011 (continuous)</i>	0.02** (0.01) 0.010	0.02*** (0.01) 0.008	0.10*** (0.03) 0.001	0.00 (0.01) 0.887	0.02** (0.01) 0.048
<i>Affiliated with the NRM</i>		-0.01 (0.29) 0.961	0.36 (0.37) 0.335	0.55 (0.38) 0.153	-0.04 (0.34) 0.894
<i>Age</i>		0.01 (0.02) 0.751	-0.01 (0.02) 0.750	-0.01 (0.02) 0.741	-0.01 (0.02) 0.732
<i>Candidate is married</i>		-0.23 (0.31) 0.463	-0.68** (0.33) 0.039	-0.53* (0.30) 0.077	-0.23 (0.32) 0.476
<i>Member of dominant religious group in region</i>		-0.34 (0.33) 0.316	-0.43 (0.31) 0.171	-0.22 (0.30) 0.471	-0.26 (0.34) 0.459
<i>Member of dominant ethnic group in district</i>		-0.15 (0.37) 0.680	0.19 (0.32) 0.551	-0.05 (0.34) 0.886	-0.21 (0.38) 0.589
<i>Education index</i>		-0.01 (0.13) 0.918	-0.13 (0.17) 0.428	-0.2 (0.16) 0.207	-0.13 (0.16) 0.421
<i>Subjective HH monthly income</i>		0.05 (0.20) 0.816	-0.05 (0.24) 0.822	-0.05 (0.23) 0.837	-0.05 (0.23) 0.826
<i>Subjective HH well-being relative to others in constituency</i>		-0.12 (0.18) 0.517	-0.13 (0.19) 0.502	-0.1 (0.18) 0.592	-0.07 (0.19) 0.732
<i>HH dependents under age 13</i>		0.13 (0.10) 0.193	0.09 (0.09) 0.352	0.13 (0.09) 0.147	0.12 (0.10) 0.239
<i>Wouldn't run without party leaders asking</i>		-0.06 (0.14) 0.653	-0.08 (0.16) 0.599	-0.09 (0.14) 0.541	0.03 (0.16) 0.875
<i>Spouse has held office or served in party leadership</i>		0.09 (0.40) 0.827	0.18 (0.35) 0.617	0.33 (0.35) 0.339	0.21 (0.38) 0.577
<i>Trust in women candidates index</i>		0.06 (0.16) 0.716	0.15 (0.16) 0.367	0.09 (0.17) 0.610	0.13 (0.17) 0.459
<i>Women candidates more informed than male candidates</i>		-0.16 (0.18) 0.374	-0.17 (0.16) 0.291	-0.11 (0.16) 0.490	-0.19 (0.18) 0.289
<i>LC3 Candidate</i>		-0.43 (0.40) 0.288	-0.18 (0.47) 0.711	-0.01 (0.39) 0.986	-0.29 (0.43) 0.498
<i>District gender inequality index</i>					-0.55*** (0.21) 0.008
<i>Share of HHs with less than 2 meals per day</i>					0.55** (0.25) 0.029
<i>Share of HHs with electricity</i>					-6.96* (3.97) 0.082
<i>Share of HHs with protected drinking water</i>					6.02** (2.97) 0.044
<i>Constant</i>					-6.44 (3.63) 0.078
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include robust standard errors.

Table 45: Main regression of competition predicting marginalized groups index.

	Model 1 no controls	Model 2 controls	Model 3 controls + const. FEs	Model 4 controls + district FEs	Model 5 controls + district factors
<i>Avg. margin of victory 2011 (continuous)</i>	0.00 (0.01) 0.733	0.00 (0.01) 0.457	-0.26*** (0.02) 0	-0.01 (0.01) 0.294	0.00 (0.01) 0.684
<i>Affiliated with the NRM</i>		0.11 (0.22) 0.621	0.18 (0.27) 0.521	0.19 (0.24) 0.438	0.2 (0.21) 0.342
<i>Age</i>		0.01 (0.01) 0.289	0.01 (0.01) 0.637	0.00 (0.01) 0.688	0.00 (0.01) 0.855
<i>Candidate is married</i>		-0.24 (0.20) 0.235	0.10 (0.20) 0.63	-0.09 (0.21) 0.675	-0.14 (0.20) 0.475
<i>Member of dominant religious group in region</i>		-0.10 (0.21) 0.641	0.19 (0.19) 0.326	0.08 (0.20) 0.685	0.09 (0.21) 0.69
<i>Member of dominant ethnic group in district</i>		0.11 (0.28) 0.687	0.04 (0.33) 0.893	-0.05 (0.28) 0.852	-0.07 (0.27) 0.792
<i>Education index</i>		0.25** (0.12) 0.04	0.10 (0.12) 0.424	0.11 (0.10) 0.307	0.13 (0.10) 0.221
<i>Subjective HH monthly income</i>		-0.19 (0.14) 0.183	-0.10 (0.14) 0.494	-0.16 (0.13) 0.23	-0.14 (0.12) 0.263
<i>Subjective HH well-being relative to others in constituency</i>		-0.04 (0.11) 0.697	-0.01 (0.11) 0.937	-0.05 (0.10) 0.613	-0.04 (0.09) 0.65
<i>HH dependents under age 13</i>		0.05 (0.05) 0.341	0.13** (0.05) 0.019	0.07 (0.05) 0.205	0.06 (0.05) 0.291
<i>Wouldn't run without party leaders asking</i>		-0.20* (0.12) 0.1	0.05 (0.13) 0.712	0.01 (0.12) 0.915	0.01 (0.12) 0.913
<i>Spouse has held office or served in party leadership</i>		-0.11 (0.20) 0.598	-0.10 (0.26) 0.695	0.01 (0.22) 0.951	0.01 (0.22) 0.966
<i>Trust in women candidates index</i>		-0.04 (0.09) 0.705	0.04 (0.09) 0.688	0.05 (0.08) 0.539	0.03 (0.08) 0.714
<i>Women candidates more informed than male candidates</i>		0.01 (0.10) 0.959	-0.02 (0.11) 0.848	0.03 (0.10) 0.721	0.04 (0.10) 0.653
<i>LC3 Candidate</i>		-0.15 (0.21) 0.477	-0.02 (0.24) 0.920	-0.15 (0.23) 0.518	-0.17 (0.20) 0.410
<i>District gender inequality index</i>					-0.67*** (0.11) 0.000
<i>Share of HHs with less than 2 meals per day</i>					0.00 (0.08) 0.952
<i>Share of HHs with electricity</i>					-7.40*** (2.52) 0.007
<i>Share of HHs with protected drinking water</i>					3.05** (1.25) 0.023
<i>Constant</i>	0.19 (0.59) 0.745	0.21 (0.92) 0.822	17.65 (1.36) 0.000	0.89 (0.83) 0.298	-0.02 (1.37) 0.986
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include standard errors clustered at the constituency level.

Table 46: Main regression of competition predicting marginalized groups index.

	Model 1 no controls	Model 2 controls	Model 3 controls + const. FEs	Model 4 controls + district FEs	Model 5 controls + district factors
<i>Avg. margin of victory 2011 (continuous)</i>	0 (0.01) 0.608	0 (0.01) 0.428	-0.26*** (0.02) 0	-0.01 (0.01) 0.335	0 (0.01) 0.648
<i>Affiliated with the NRM</i>		0.11 (0.24) 0.652	0.18 (0.28) 0.536	0.19 (0.26) 0.471	0.2 (0.24) 0.392
<i>Age</i>		0.01 (0.01) 0.265	0.01 (0.01) 0.575	0 (0.01) 0.657	0 (0.01) 0.846
<i>Candidate is married</i>		-0.24 (0.24) 0.306	0.1 (0.24) 0.683	-0.09 (0.22) 0.698	-0.14 (0.22) 0.508
<i>Member of dominant religious group in region</i>		-0.1 (0.21) 0.63	0.19 (0.20) 0.34	0.08 (0.21) 0.69	0.09 (0.20) 0.675
<i>Member of dominant ethnic group in district</i>		0.11 (0.25) 0.655	0.04 (0.25) 0.861	-0.05 (0.22) 0.814	-0.07 (0.23) 0.753
<i>Education index</i>		0.25** (0.12) 0.033	0.1 (0.12) 0.409	0.11 (0.11) 0.323	0.13 (0.11) 0.233
<i>Subjective HH monthly income</i>		-0.19 (0.14) 0.162	-0.1 (0.14) 0.489	-0.16 (0.13) 0.235	-0.14 (0.13) 0.294
<i>Subjective HH well-being relative to others in constituency</i>		-0.04 (0.12) 0.71	-0.01 (0.13) 0.944	-0.05 (0.12) 0.667	-0.04 (0.11) 0.706
<i>HH dependents under age 13</i>		0.05 (0.06) 0.365	0.13** (0.06) 0.024	0.07 (0.05) 0.213	0.06 (0.05) 0.272
<i>Wouldn't run without party leaders asking</i>		-0.20** (0.09) 0.024	0.05 (0.11) 0.672	0.01 (0.11) 0.904	0.01 (0.11) 0.902
<i>Spouse has held office or served in party leadership</i>		-0.11 (0.23) 0.647	-0.1 (0.25) 0.681	0.01 (0.23) 0.953	0.01 (0.23) 0.968
<i>Trust in women candidates index</i>		-0.04 (0.09) 0.677	0.04 (0.10) 0.714	0.05 (0.09) 0.563	0.03 (0.09) 0.721
<i>Women candidates more informed than male candidates</i>		0.01 (0.09) 0.956	-0.02 (0.10) 0.834	0.03 (0.09) 0.71	0.04 (0.09) 0.631
<i>LC3 Candidate</i>		-0.15 (0.24) 0.523	-0.02 (0.23) 0.915	-0.15 (0.24) 0.532	-0.17 (0.23) 0.462
<i>District gender inequality index</i>					-0.67*** (0.13) 0
<i>Share of HHs with less than 2 meals per day</i>					0 (0.13) 0.97
<i>Share of HHs with electricity</i>					-7.40*** (2.37) 0.002
<i>Share of HHs with protected drinking water</i>					3.05* (1.74) 0.083
<i>Constant</i>	0.19 (0.39) 0.618	0.21 (0.83) 0.8	17.65 (1.45) 0	0.89 (0.96) 0.359	-0.02 (1.79) 0.989
<i>N</i>	157	157	157	157	157

\* $p < 0.10$  \*\* $p < 0.05$  \*\*\* $p < 0.01$  All models include robust standard errors.

## BIBLIOGRAPHY

- Abadie, Alberto, Susan Athey, Guido W. Imbens and Jeffrey Wooldridge. 2017. “When Should You Adjust Standard Errors for Clustering?” Working paper no. 17-030.  
**URL:** <https://arxiv.org/pdf/1710.02926.pdf>
- Abelson, Robert P. 1985. “A Variance Explanation Paradox: When a Little is a Lot.” *Psychological Bulletin* 97(1):129–133.
- Ahikire, Josephine. 2009. Women’s Engagement with Political Parties in Contemporary Africa: Reflections on Uganda’s Experience. Policy Brief 65 Centre for Policy Studies Johannesburg, South Africa: .
- Akeel, Randa. 2009. Gender-Based Differences among Entrepreneurs and Workers in Lebanon. MENA Knowledge and Learning Quick Notes Series 6 The World Bank.
- Alesina, Alberto, Reza Baqir and William Easterly. 1999. “Public Goods and Ethnic Divisions.” *Quarterly Journal of Economics* 114(4):1243–1284.
- Anderson, Michael. 2008. “Multiple Inference and Gender Differences in the Effects of Early Intervention.” *Journal of the American Statistical Association* 103(484):1481–1495.
- Andreoni, James and Lise Vesterlund. 2001. “Which Is the Fair Sex? Gender Differences in Altruism.” *Quarterly Journal of Economics* 116:293–312.
- Axelrod, Robert. 1984. *The Evolution of Cooperation*. Basic Books.
- Aziz, Joana. 2017. “Why women are almost invisible in Lebanon’s parliament.” Online by Middle East Eye.  
**URL:** <https://www.middleeasteye.net/opinion/why-women-are-almost-invisible-lebanons-parliament>
- Bahramitash, Roksana. 2014. “Low-Income Islamic Women, Poverty and the Solidarity Economy in Iran.” *Middle East Critique* 23(3):363–377.
- Balliet, Daniel, Junhui Wu and Carsten K.W. De Dreu. 2014. “Ingroup Favoritism in Cooperation: A Meta-Analysis.” *Psychological Bulletin* 140(6):1556–1581.

- Balliet, Daniel, Norman P. Li, Shane J. Macfarlan and Mark Van Vugt. 2011. "Sex Differences in Cooperation: A Meta-Analytic Review of Social Dilemmas." *Psychological Bulletin* 137(6):881–909.
- Bauer, Gretchen. 2008. Reserved Seats for Women MPs: Affirmative Action for the National Women's Movement or the National Resistance Movement. In *Women and Legislative Representation: Electoral Systems, Political Parties, and Sex Quotas*, ed. Manon Tremblay. New York, NY: Palgrave Macmillan chapter 1, pp. 27–39.
- Beall, Jo. 2005. "Decentralizing Government and Decentering Gender: Lessons from Local Government Reform in South Africa." *Politics & Society* 33(2):253–276.  
**URL:** <http://pas.sagepub.com/cgi/doi/10.1177/0032329205275194>
- Beaman, Lori, Rohini Pande and Alexandra Cirone. 2012. Politics as a Male Domain and Empowerment in India. In *The Impact of Gender Quotas*, ed. Susan Franceschet, Mona Lena Krook and Jennifer M. Piscopo. New York, NY: Oxford University Press pp. 208–228.
- Beckwith, Karen. 2011. "Interests, Issues, and Preferences: Women's Interests and Epiphenomena of Activism." *Politics & Gender* 7(3):424–429.
- Benjamin, D.J., J.J. Choi and A.J. Strickland. 2010. "Social Identity and Preferences." *American Economic Review* 100(4):1913–1928.
- Benstead, Lindsay J. 2016. "Why Quotas Are Needed to Improve Women's Access to Services in Clientelistic Regimes." *Governance* 29(2):185–205.
- Berge, Lars Ivar Oppedal, Kartika Sari Juniwaty and Linda Helgesson Sekei. 2016. "Gender Composition and Group Dynamics: Evidence from a Laboratory Experiment with Microfinance Clients." *Journal of Economic Behavior & Organization* 131:1–20.
- Berge, Lars Ivar Oppedal, Kjetil Bjorvatn, Simon Galle, Edward Miguel, Daniel N. Posner, Bertil Tungodden and Kelly Zhang. 2016. "How Strong are Ethnic Preferences?" Working paper.  
**URL:** <http://www.nber.org/papers/w21715>
- Boyd, Robert and Peter J. Richerson. 2009. "Culture and the Evolution of Human Cooperation." *Philosophical Transactions: Biological Sciences* 364(1533):3281–3288.
- Braga, Michela and Francesco Scervini. 2017. "The Performance of Politicians: The Effect of Gender Quotas." *European Journal of Political Economy* 46:1–14.
- Brañas-Garza, P., R. Cobo-Reyes, M.P. Espinosa, N. Jiménez, Jaromir Kovářik and G. Ponti. 2010. "Altruism and Social Integration." *Games and Economic Behavior* 69:249–257.
- Brewer, Marilyn. 1996. "When Contact is Not Enough: Social Identity and Intergroup Cooperation." *International Journal of Intercultural Relations* 20(3/4):291–303.



- Brewer, Marilyn. 2000. Reducing Prejudice through Cross-Categorization: Effects of Multiple Social Identities. In *Reducing Prejudice and Discrimination*, ed. Stuart Oskamp. Mahwah, NJ: Erlbaum pp. 165–183.
- Brewer, Marilyn B. 1991. “The Social Self: On Being the Same and Different at the Same Time.” *Personality and Social Psychology Bulletin* 17(5):475–482.
- Brown-Iannuzzi, Jazmin L., Kristjen B. Lundberg and Stephanie McKee. 2017. “Political Action in the Age of High-Economic Inequality: A Multilevel Approach.” *Social Issues and Policy Review* 11(1):232–273.
- Brown-Kruse, Jamie and David Hummels. 1993. “Gender Effects in Laboratory Public Goods Contribution: Do Individuals Put Their Money Where Their Mouth Is?” *Journal of Economic Behavior and Organization* 22(3):255–267.
- Buckley, Edward and Rachel Croson. 2006. “Income and Wealth Heterogeneity in the Voluntary Provision of Linear Public Goods.” *Journal of Public Economics* 90:935–955.
- Bunch, Charlotte. 1990. “Women’s Rights as Human Rights: Toward a Re-Vision of Human Rights.” *Human Rights Quarterly* 12(4):486–498.
- Burgess, Robin, Remi Jedwab, Edward Miguel, Ameet Morjaria and Gerard Padro I Miguel. 2015. “The Value of Democracy: Evidence from Road Building in Kenya.” *American Economic Review* 105(6):1817–1851.
- Burnet, Jennie. 2012. Women’s Empowerment and Cultural Change in Rwanda. In *The Impact of Gender Quotas*, ed. Susan Franceschet, Mona Lena Krook and Jennifer M. Piscopo. New York, NY: Oxford University Press pp. 190–207.
- Callan, Mitchell J., Hyunji Kim, Ana I. Gheorghiu and William J. Matthews. 2017. “The Interrelations Between Social Class, Personal Relative Deprivation, and Prosociality.” *Social Psychological and Personality Science* 8(6):660–669.
- Candelo, Natalia, Rachel T.A. Croson and Sherry Xin Li. 2017. “Identity and Social Exclusion: An Experiment with Hispanic Immigrants in the U.S.” *Experimental Economics* 20:460–480.
- Carpenter, J. and P. Matthews. 2012. “Norm Enforcement: Anger, Indignation, or Reciprocity.” *Journal of the European Economic Association* 10(3):555–572.
- Carpenter, Jeffrey P., Amrita G. Daniere and Lois M. Takahashi. 2004. “Social Capital and Trust in South-east Asian Cities.” *Urban Studies* 41(4):853–874.
- Celis, Karen, Sarah Childs, Johanna Kantola and Mona Lena Krook. 2014. “Constituting Women’s Interests through Representative Claims.” *Politics & Gender* 10:149–174.
- Center for Women in Government and Civil Society Rockefeller, Rockefeller College of Public Affairs and Policy, University at Albany State University of New York and School of Social

- Sciences Nkumba University. 2014. Mapping the Substantive Representation of Women in the Ugandan Parliament. Technical report.
- Ceyhun, Huseyin Emre. 2017. Lebanon: Five Years after the Arab Uprisings – Findings from the Arab Barometer. Wave 4 lebanon country report Arab Barometer.
- Chan, Kenneth S., Stuart Mestelman, Rob Moir and R. Andrew Muller. 1996. “The Voluntary Provision of Public Goods under Varying Income Distributions.” *The Canadian Journal of Economics* 29(1):54–69.
- Chang, Han Il and Leonid Peisakhin. 2019. “Building Cooperation among Groups in Conflict: An Experiment on Intersectarian Cooperation in Lebanon.” *American Journal of Political Science* 63(1):146–162.
- Charness, Gary and Aldo Rustichini. 2011. “Gender Differences in Cooperation with Group Membership.” *Games and Economic Behavior* 72:77–85.
- Charness, Gary, Ramon Cobo-Reyes and Natalia Jimenez. 2014. “Identities, Selection, and Contributions in a Public-Goods Game.” *Games and Economic Behavior* 87:322–338.
- Chattopadhyay, Raghabendra and Esther Duflo. 2004. “Women as Policy Makers: Evidence From a Randomized Policy Experiment in India.” *Econometrica* 72(5):1409–1443.
- Chaudhuri, Ananish. 2011. “Sustaining Cooperation in Laboratory Public Goods Experiments: A Selective Survey of the Literature.” *Experimental Economics* 14(1):47–83.
- Chaudhuri, Ananish. 2016. “Recent Advances in Experimental Studies of Social Dilemma Games.” *Games* 7(7):1–11.
- Chaudhuri, Ananish, Tirnud Paichayontvijit and Alexander Smith. 2017. “Belief Heterogeneity and Contributions Decay among Conditional Cooperators in Public Goods Games.” *Journal of Economic Psychology* 58:15–30.  
**URL:** <http://www.sciencedirect.com/science/article/pii/S0167487016300277?via%3Dihub>
- Chen, Y. and S. Li. 2009. “Group Identity and Social Preferences.” *American Economic Review* 99(1):431–457.
- Chowdhury, Subhasish M., Joo Young Jeon and Abhijit Ramalingam. 2016. “Identity and Group Conflict.” *European Economic Review* 90:107–121.
- Clayton, Amanda, Cecilia Josefsson and Vibeke Wang. 2017. “Quotas and Women’s Substantive Representation: Evidence from a Content Analysis of Ugandan Plenary Debates.” *Politics & Gender* 13:276–304.
- Clayton, Amanda and Pär Zetterberg. forthcoming. “Quota Shocks: Electoral Gender Quotas and Government Spending Priorities Worldwide.” *Journal of Politics* pp. 1–32.

- Cleary, Matthew R. 2007. "Electoral Competition, Participation, and Government Responsiveness in Mexico." *American Journal of Political Science* 51(2):283–299.
- Collins, Patricia Hill. 2015. "Intersectionality's Definitional Dilemmas." *Annual Review of Sociology* 41:1–20.
- Corstange, Daniel. 2016. *The Price of a Vote in the Middle East: Clientelism and Communal Politics in Lebanon and Yemen*. New York, NY: Cambridge University Press.
- Côté, Stéphane, Julian House and Robb Willer. 2015. "High Economic Inequality Leads Higher-Income Individuals to be Less Generous." *Proceedings of the National Academy of Sciences* 112(52):15838–15843.
- Crenshaw, Kimberle. 1991. "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color." *Stanford Law Review* 43(6):1241–1299.  
**URL:** <http://www.jstor.org/stable/1229039?origin=crossref>
- Croson, Rachel, Melanie Marks and Jessica Snyder. 2008. "Groups Work for Women: Gender and Group Identity in Social Dilemmas." *Negotiation Journal* 24(4):411–427.
- Croson, Rachel T.A. 2007. "Theories of Commitment, Altruism and Reciprocity: Evidence from Linear Public Goods Games." *Economic Inquiry* 45(2):199–216.
- Croson, Rachel T.A. 2008. Differentiating Altruism and Reciprocity. In *Handbook of Experimental Economics Results*, ed. Charles R. Plott and Vernon L. Smith. Handbooks in Economics Amsterdam: North-Holland chapter 83, pp. 784–791.
- Cross, S.E. and L. Madson. 1997. "Models of the Self: Self-Construals and Gender." *Psychological Bulletin* 1:5–37.
- Dahlerup, Drude and Lenita Freidenvall. 2009. Gender Quotas in Politics: A Constitutional Challenge. In *Constituting Equality: Gender Equality and Comparative Constitutional Law*, ed. Susan H. Williams. New York, NY: Cambridge University Press pp. 29–52.
- Dill, Bonnie Thornton. 1983. "Race, Class, and Gender: Prospects for an All-Inclusive Sisterhood." *Feminist Studies* 9(1):131–150.
- Dolan, Kathleen. 2010. "The Impact of Gender Stereotyped Evaluations on Support for Women Candidates." *Political Behavior* 32(1):69–88.
- Duflo, Esther and Petia Topalova. 2004. "Unappreciated Service: Performance, Perceptions, and Women: Leaders in India." Working paper: Massachusetts Institute of Technology, Department of Economics.
- Eagly, Alice H. and Steven J. Karau. 2002. "Role Congruity Theory of Prejudice toward Female Leaders." *Psychological Review* 109(3):573–598.

- Eagly, Alice H. and Wendy Wood. 1991. "Explaining Sex Differences in Social Behavior: A Meta-Analytic Perspective." *Personality and Social Psychology Bulletin* 17(3):306–315.
- Eagly, Alice H. and Wendy Wood. 1999. "The Origins of Sex Differences in Human Behavior: Evolved Dispositions Versus Social Roles." *American Psychologist* 54(6):408–423.
- Easterbrook, M., T. Kuppens and A.S.R. Manstead. 2018. "Socioeconomic Status and the Structure of the Self-Concept." Unpublished manuscript.
- Easterly, William and Ross Levine. 1997. "Africa's Growth Tragedy: Policies and Ethnic Divisions." *Quarterly Journal of Economics* 112(4):1203–1250.
- Eckel, Catherine C. and Philip J. Grossman. 1998. "Are Women Less Selfish Than Men?: Evidence from Dictator Experiments." *The Economic Journal* 108(448):726–735.
- Eckel, Catherine C. and Philip J. Grossman. 2008a. Differences in the Economic Decisions of Men and Women: Experimental Evidence. In *Handbook of Experimental Economics Results*, ed. Charles R. Plott and Vernon L. Smith. Vol. 1 Amsterdam: North-Holland chapter 57, pp. 509–519.
- Eckel, Catherine C. and Philip J. Grossman. 2008b. Men, Women and Risk Aversion: Experimental Evidence. In *Handbook of Experimental Economics Results*, ed. Charles R. Plott and Vernon L. Smith. Vol. 1 Amsterdam: North-Holland chapter 113, pp. 1061–1073.
- Ejdemyr, Simon, Eric Kramon and Amanda Lea Robinson. 2018. "Segregation, Ethnic Favoritism, and the Strategic Targeting of Local Public Goods." *Comparative Political Studies* 51(9):1111–1143.
- El Feki, S., B. Heilman and G. Barker. 2017. Understanding Masculinities: Results from the International Men and Gender Equality Survey (IMAGES) – Middle East and North Africa. Technical report UN Women and Promundo-US Cairo and Washington, D.C.: .
- Espinosa, María Paz and Jaromir Kovářík. 2015. "Prosocial Behavior and Gender." *Frontiers in Behavioral Neuroscience* 9(88):1–9.
- Everett, Jim A.C., Nadira S. Faber and Molly J. Crockett. 2015. "The Influence of Social Preferences and Reputational Concerns on Intergroup Prosocial Behavior in Gains and Losses Contexts." *Royal Society of Open Science* 2:150546.
- Fearon, James and Macartan Humphreys. 2017. "Why Do Women Co-operate More in Women's Groups?" WIDER Working Paper 2017/163.
- Fehr, Ernst and Karla Hoff. 2011. "Introduction: Tastes, Castes and Culture: The Influence of Society on Preferences." *The Economic Journal* 121:F396–F412.
- Fischbacher, Urs and Simon Gächter. 2010. "Social Preferences, Beliefs, and the Dynamics of Free Riding in Public Goods Experiments." *American Economic Review* 100(1):541–556.

- Fischbacher, Urs, Simon Gächter and Ernst Fehr. 2001. "Are People Conditionally Cooperative? Evidence from a Public Goods Experiment." *Economics Letters* 71(3):397–404.
- Franceschet, Susan and Jennifer M. Piscopo. 2008. "Gender Quotas and Women's Substantive Representation: Lessons from Argentina." *Politics & Gender* 4(03):393–425.
- Franceschet, Susan, Mona Lena Krook and Jennifer M. Piscopo, eds. 2012. *The Impact of Gender Quotas*. London: Oxford University Press.
- Franck, Raphael and Ilia Rainer. 2012. "Does the Leader's Ethnicity Matter? Ethnic Favoritism, Education, and Health in Sub-Saharan Africa." *American Political Science Review* 106(2):294–325.
- Fujimoto, Hiroaki and Eun-Soo Park. 2010. "Framing Effects and Gender Differences in Voluntary Public Goods Provision Experiments." *The Journal of Socio-Economics* 39:455–457.
- Gächter, Simon, Benedikt Herrmann and Christian Thöni. 2004. "Trust, Voluntary Cooperation, and Socio-Economic background: Survey and Experimental Evidence." *Journal of Economic Behavior and Organization* 55:505–531.
- Galbraith, Craig S., Carlos L. Rodriguez and Curt H. Stiles. 2007. "Social Capital as a Club Good: The Case of Ethnic Communities and Entrepreneurship." *Journal of Enterprising Communities: People and Places in the Global Economy* 1(1):38–53.
- Geagea, Nayla and Lama Fakih. 2015. Unequal and Unprotected: Women's Rights under Lebanese Personal Status Laws. Technical report Human Rights Watch.
- Gerber, Alan and Donald Green. 2012. *Field Experiments: Design, Analysis, and Interpretation*. W.W. Norton and Company.
- Goette, Lorenz, David Huffman and Stephan Meier. 2012. "The Impact of Social Ties on Group Interactions: Evidence from Minimal Groups and Randomly Assigned Real Groups." *American Economic Journal: Microeconomics* 4(1):101–115.
- Goetz, Anne Marie. 2007. "Political Cleaners: Women as the New Anti-Corruption Force?" *Development and Change* 38(1):87–105.
- Goetz, Anne Marie and Shireen Hassim, eds. 2003. *No Shortcuts to Power: African Women in Politics and Policy Making*. London: Zed Books.
- Graham-Brown, Sarah. 2001. Women's Activism in the Middle East: A Historical Perspective. In *Women and Power in the Middle East*, ed. Suad Joseph and Susan Slyomovics. Philadelphia, PA: University of Pennsylvania Press pp. 23–33.
- Green, Elliot. 2010. "Patronage, District Creation, and Reform in Uganda." *Studies in Comparative International Development* 45(1):83–103.

- Greig, Fiona and Iris Bohnet. 2009. "Exploring Gendered Behavior in the Field with Experiments: Why Public Goods Are Provided by Women in a Nairobi Slum." *Journal of Economic Behavior and Organization* 70:1–9.
- Grossman, Guy and Kristin Michelitch. 2018. "Information Dissemination, Competitive Pressure, and Politician Performance between Elections: A Field Experiment in Uganda." *American Political Science Review* 112(2):280–301.
- Gurr, Ted Robert. 1993. *Minorities at Risk: A Global View of Ethnopolitical Conflict*. Washington, DC: United States Institute for Peace Press.
- Gurr, Ted Robert. 2011. *Why Men Rebel*. New York, NY: Routledge.
- Habyarimana, James, Macartan Humphreys, Daniel N. Posner and Jeremy M. Weinstein. 2007. "Why Does Ethnic Diversity Undermine Public Goods Provision?" *The American Political Science Review* 101(4):709–725.
- Habyarimana, James, Macartan Humphreys, Daniel Posner and Jeremy Weinstein. 2009. *Coethnicity: Diversity and the Dilemmas of Collective Action*. Russell Sage Foundation.
- Hammond, Ross A. and Robert Axelrod. 2006. "The Evolution of Ethnocentrism." *Journal of Conflict Resolution* 50(6):926–936.
- Hammoud, May. 2014. Legal and Contextual Research on Women Economic Empowerment in Lebanon. Technical report Search for Common Ground Beirut, Lebanon: .
- Hancock, Ange-Marie. 2007. "Intersectionality as a Normative and Empirical Paradigm." *Politics & Gender* 3(2):248–254.
- Hardy, Charlie L. and Mark Van Vugt. 2006. "Nice Guys Finish First: The Competitive Altruism Hypothesis." *Personality and Social Psychology Bulletin* 32(10):1402–1413.
- Harnois, Catherine E. 2010. Imagining a "Feminist Revolution": Can Multiracial Feminism Revolutionize Quantitative Social Science Research? In *Intersectional Approach: Transforming the Academy through Race, Class, and Gender*, ed. Michele Tracy Berger and Kathleen Guidroz. Chapel Hill, NC: The University of North Carolina Press pp. 157–172.
- Hays, Nicholas A. and Steven L. Blader. 2017. "To Give or Not to Give? Interactive Effects of Status and Legitimacy on Generosity." *Journal of Personality and Social Psychology* 112(1):17–38.
- Helou, Marguerite. 2009. "Women Quota in Lebanon: A False Promise?" *Al Raida* 126–127(Summer/Fall):58–65.
- Hewstone, Miles, Mark Rubin and Hazel Willis. 2002. "Intergroup Bias." *Annual Review of Psychology* 53:575–604.

- Hjort, J. 2014. "Ethnic Divisions and Production in Firms." *Quarterly Journal of Economics* 129(4):1899–1946.
- Hughes, Melanie M. 2011. "Intersectionality, Quotas, and Minority Women's Political Representation Worldwide." *American Political Science Review* 105(3):604–620.
- Hughes, Melanie M., Mona Lena Krook and Pamela Paxton. 2015. "Transnational Women's Activism and the Global Diffusion of Gender Quotas." *International Studies Quarterly* 59(2):357–372.  
**URL:** <http://doi.wiley.com/10.1111/isqu.12190>
- Humphreys, Macartan, Raul Sanchez de la Sierra and Peter van der Windt. 2013. "Fishing, Commitment, and Communication: A Proposal for Comprehensive Non-binding Research Registration." *Political Analysis* 21(1):1–20.
- Hussein, Walid. 2017. "The 'Female Quota' in Lebanon: A Temporary Solution to a Chronic Political Problem." Online by Heinrich Böll Stiftung.  
**URL:** <https://lb.boell.org/en/2017/02/17/female-quota-lebanon-temporary-solution-chronic-political-problem>
- Hyde, Janet Shibley. 2014. "Gender Similarities and Differences." *Annual Review of Psychology* 65:373–398.
- Inter-Parliamentary Union. 2016. "PARLINE Database on National Parliaments."  
**URL:** <http://www.ipu.org/parline-e/parlinesearch.asp>
- Issa, Laudy. 2017. "Thousands March for Women's Rights in Beirut." Online via Outlook - American University of Beirut.  
**URL:** <http://outlookaub.com/2017/03/14/thousands-march-womens-rights-beirut/>
- Izama, Angelo. 2015. "Bitter Battles. Local Elections Shape the 2016 Race." *Political Blog*.  
**URL:** <http://www.angeloizama.com/angelo-opi-aiya-izama/2015/7/30/bitter-battles-local-elections-shape-the-2016-race>
- Josefsson, Cecilia. 2014. "Who Benefits from Gender Quotas? Assessing the Impact of Election Procedure Reform on Members of Parliament's Attributes in Uganda." *International Political Science Review* 35(1):93–105.
- Joseph, Suad. 2001. Women and Politics in the Middle East. In *Women and Power in the Middle East*, ed. Suad Joseph and Susan Slyomovics. Philadelphia, PA: University of Pennsylvania Press pp. 34–40.
- Kangas, Olli and Tine Rostgaard. 2007. "Preferences or Institutions? Work-Family Life Opportunities in Seven European Countries." *Journal of European Social Policy* 17(3):240–256.

- Kanthak, Kristin and George A. Krause. 2010. "Valuing Diversity in Political Organizations: Gender and Token Minorities in the U.S. House of Representatives." *American Journal of Political Science* 54(4):839–854.
- Kanthak, Kristin and George A. Krause. 2011. "Coordination Dilemmas and the Valuation of Women in the U.S. Senate: Reconsidering the Critical Mass Problem." *Journal of Theoretical Politics* 23(2):188–214.
- Khattab, Lara. 2010. Civil Society in a Sectarian Context: The Women's Movement in Post-War Lebanon. Master's thesis Lebanese American University Beirut, Lebanon: .
- Kingston, Paul W.T. 2013. *Reproducing Sectarianism: Advocacy Networks and the Politics of Civil Society in Postwar Lebanon*. Albany, NY: State University of New York Press.
- Klar, Samara. 2018. "When Common Identities Decrease Trust: An Experimental Study of Partisan Women." *American Journal of Political Science* 00(0):1–13.
- Kocher, Martin G., Peter Martinsson, Dominik Matzat and Conny Wollbrant. 2015. "The Role of Beliefs, Trust, and Risk in Contributions to a Public Good." *Journal of Economic Psychology* 51:236–244.
- Kocher, Martin G., Todd Cherry, Stephan Kroll, Robert J. Netzer and Matthias Sutter. 2008. "Conditional Cooperation on Three Continents." *Economics Letters* 101(3):175–178.
- Koopmans, Ruud and Susanne Rebers. 2009. "Collective Action in Culturally Similar and Dissimilar Groups: An Experiment on Parochialism, Conditional Cooperation, and their Linkages." *Evolution and Human Behavior* 30:201–211.
- Kraus, Michael W., Jacinth J.X. Tan and Melanie B. Tannenbaum. 2013. "The Social Ladder: A Rank-Based Perspective on Social Class." *Psychological Inquiry* 24:81–96.
- Kraus, Michael W. and Nicole M. Stephens. 2012. "A Road Map for an Emerging Psychology of Social Class." *Social and Personality Psychology Compass* 6(9):642–656.
- Kraus, Michael W., Paul K. Piff, Rodolfo Mendoza-Denton, Michelle L. Rheinschmidt and Dacher Keltner. 2012. "Social Class, Solipsism, and Contextualism: How the Rich are Different from the Poor." *Psychological Review* 119(3):546–572.
- Krook, Mona Lena. 2009. *Quotas for Women in Politics*. New York, NY: Oxford University Press.
- Kudva, Neema. 2003. "Engineering Elections: The Experiences of Women in Panchayati Raj in Karnataka, India." *International Journal of Politics, Culture, and Society* 16(3):445–463.
- Kurzban, Robert, Maxwell N. Burton-Chellew and Stuart A. West. 2015. "The Evolution of Altruism in Humans." *Annual Review of Psychology* 66(1):575–599.  
**URL:** <http://www.annualreviews.org/doi/10.1146/annurev-psych-010814-015355>



- Larson, Anna. 2012. Collective Identities, Institutions, Security, and State Building in Afghanistan. In *The Impact of Gender Quotas*, ed. Susan Franceschet, Mona Lena Krook and Jennifer M. Piscopo. New York, NY: Oxford University Press pp. 136–155.
- Ledyard, John O. 1995. Public Goods: A Survey of Experimental Research. In *Handbook of Experimental Economics*, ed. John H. Kagel and Alvin E. Roth. Princeton, NJ: Princeton University Press chapter 2, pp. 111–193.  
**URL:** <http://ideas.repec.org/p/wpa/wwwppe/9405003.html>
- Lee, Sun Young, Selin Kesebir and Madan M. Pillutla. 2016. “Gender Differences in Response to Competition With Same-Gender Coworkers: A Relational Perspective.” *Journal of Personality and Social Psychology* 110(6):869–886.
- Mahdawi, Dalila. 2010. “Posh Women’s Rights in the Middle East.” Online by The Guardian - Middle East and North Africa: Opinion.  
**URL:** <https://www.theguardian.com/commentisfree/2010/dec/01/new-arab-woman-forum-elitist-club>
- Manstead, Antony S.R. 2018. “The Psychology of Social Class: How Socioeconomic Status Impacts Thought, Feelings, and Behaviour.” *British Journal of Social Psychology* 57:267–291.
- Markus, H.R. and S. Kitayama. 1991. “Culture and the Self: Implications for Cognition, Emotion and Motivation.” *Psychological Review* 98:224–253.
- Martell, Richard F., David M. Lane and Cynthia Emrich. 1996. “Male-Female Differences: A Computer Simulation.” *American Psychologist* 51(2):157–158.
- Martinsson, Peter, Clara Villegas-Palacio and Conny Wollbrant. 2015. “Cooperation and Social Classes: Evidence from Colombia.” *Social Choice and Welfare* 45(829-848).
- Miguel, Edward and Mary Kay Gugerty. 2005. “Ethnic Diversity, Social Sanctions, and Public Goods in Kenya.” *Journal of Public Economics* 89(11-12):2325–68.
- Monogan III, James E. 2015. “Research Preregistration in Political Science: The Case, Counterarguments, and a Response to Critiques.” *PS: Political Science and Politics* 48(03):425–429.
- Muriaas, Ragnhild L. and Vibeke Wang. 2012. “Executive Dominance and the Politics of Quota Representation in Uganda.” *The Journal of Modern African Studies* 50(02):309–338.
- Mutz, Diana. 2002. “Cross-cutting Social Networks: Testing Democratic Theory in Practice.” *American Political Science Review* 96(1):111–126.
- Niederle, Muriel and Lise Vesterlund. 2007. “Do Women Shy Away from Competition? Do Men Compete Too Much?” *The Quarterly Journal of Economics* 122(3):1067–1101.

- Nosenzo, Daniele and Fabio Tufano. 2017. "The Effect of Voluntary Participation on Cooperation." *Journal of Economic Behavior & Organization* 142:307–319.
- Nowell, Clifford and Sarah Tinkler. 1994. "The Influence of Gender on the Provision of a Public Good." *Journal of Economic Behavior and Organization* 25:25–36.
- Olken, Benjamin. 2015. "The Promise and Perils of Pre-Analysis Plans." *Journal of Economic Perspectives* 29(3):61–80.
- Paler, Laura, Leslie Marshall and Sami Atallah. 2018. "How Talking Across Ethnic and Class Divides Shapes Support for Ethnic Politics: Evidence from an Experiment in Lebanon." Working Paper.  
**URL:** [https://laurapaler.files.wordpress.com/2018/12/Leb\\_xcutting\\_MAIN.pdf](https://laurapaler.files.wordpress.com/2018/12/Leb_xcutting_MAIN.pdf)
- Palfrey, Thomas R. and Jeffrey E. Prisbrey. 1996. "Altruism, Reputation and Noise in Linear Public Goods Experiments." *Journal of Public Economics* 61(3):409–427.
- Pande, Rohini. 2011. "Can Informed Voters Enforce Better Governance? Experiments in Low-Income Countries." *Annual Review of Economics* 3:215–237.
- Pateman, Carole. 1988. *The Sexual Contract*. Stanford, CA: Stanford University Press.
- Pateman, Carole. 1996. "Democracy and Democratization. Presidential Address: XVIth World Congress, IPSA." *International Political Science Review* 17(1):5–12.
- Pateman, Carole. 2011. "Securing Women's Citizenship: Indifference and Other Obstacles." Online by Eurozine.  
**URL:** <https://www.eurozine.com/securing-womens-citizenship-indifference-and-other-obstacles/?pdf>
- Paxton, Pamela and Melanie M. Hughes. 2015. "The Increasing Effectiveness of National Gender Quotas, 1990-2010." *Legislative Studies Quarterly* 40(3):331–362.  
**URL:** <http://doi.wiley.com/10.1111/lsq.12079>
- Paxton, Pamela, Melanie M. Hughes and Jennifer L. Green. 2006. "The International Women's Movement and Women's Political Representation, 1893-2003." *American Sociological Review* 71(6):898–920.
- Peteet, Julie. 2001. Women and the Palestinian Movement: No Going Back? In *Women and Power in the Middle East*, ed. Suad Joseph and Susan Slyomovics. Philadelphia, PA: University of Pennsylvania Press pp. 135–149.
- Piff, Paul K., Daniel M. Stancato, Stephane Cote, Rodolfo Mendoza-Denton and Dacher Keltner. 2012. "Higher Social Class Predicts Increased Unethical Behavior." *Proceedings of the National Academy of Sciences* 109(11):4086–4091.

- Piff, Paul K., Michael W. Kraus, Stephane Cote, Bonnie Hayden Cheng and Dacher Keltner. 2010. "Having Less, Giving More: The Influence of Social Class on Prosocial Behavior." *Journal of Personality and Social Psychology* 99(5):771–784.
- Pitkin, Hanna Fenichel. 1967. *The Concept of Representation*. Berkeley, CA: University of California Press.
- Posner, Daniel. 2004. "The Political Salience of Cultural Difference: Why Chewas and Tumbukas are Allies in Zambia and Adversaries in Malawi." *American Political Science Review* 98(4):529–545.
- Posner, Daniel N. 2017. "When and Why Do Some Social Cleavages Become Politically Salient Rather Than Others?" *Ethnic and Racial Studies* 40(12):2001–2019.
- Qi, Yue, Qi Li and Feng Du. 2018. "Are Rich People Perceived as More Trustworthy? Perceived Socioeconomic Status Modulates Judgments of Trustworthiness and Trust Behavior Based on Facial Appearance." *Frontiers in Psychology* 9(512):1–9.
- Raihani, Nichola J. and Redouan Bshary. 2015. "Why Humans Might Help Strangers." *Frontiers in Behavioral Neuroscience* 9(39):1–11.
- Salameh, Riwa. 2014. Gender Politics in Lebanon and the Limits of Legal Reformism. Technical report Civil Society Knowledge Center Lebanon Support: .
- Salti, Nisreen and Jan Chaaban. 2010. "The Role of Sectarianism in the Allocation of Public Expenditure in Postwar Lebanon." *International Journal of Middle East Studies* 42:637–655.
- Schwindt-Bayer, Leslie A. 2009. "Making Quotas Work: The Effect of Gender Quota Laws On the Election of Women." *Legislative Studies Quarterly* 34(1):5–28.
- Strolovitch, Dara Z. 2006. "Do Interest Groups Represent the Disadvantaged? Advocacy at the Intersections of Race, Class, and Gender." *Journal of Politics* 68(4):894–910.
- Tajfel, Henri. 1982. "Social Psychology of Intergroup Relations." *Annual Review of Psychology* 33:1–39.
- Tamale, Sylvia. 1999. *When Hens Begin to Crow: Gender and Parliamentary Politics in Uganda*. Kampala, Uganda: Fountain Publishers.
- Tamale, Sylvia. 2003. "Introducing Quotas in Africa: Discourse and Legal Reform in Uganda." Working paper presented at a conference on 'The Implementation of Quotas: African Experiences'.
- Tanenbaum, Leora. 2011. *Catfight: Women and Competition*. New York, NY: Seven Stories Press.

- Task Force on Democracy, Economic Security, and Social Justice in a Volatile World. 2011. Democratic Imperatives: Innovations in Rights, Participation, and Economic Citizenship. Draft report American Political Science Association Washington, DC: .
- The Quota Project. 2017. “Uganda: Quota at the Sub-National Level.”  
**URL:** <http://www.quotaproject.org/country/uganda>
- The World Economic Forum. 2015. “The Global Gender Gap Report 2015: Uganda Country Profile.”  
**URL:** <http://www3.weforum.org/docs/GGGR2015/UGA.pdf>
- Tripp, Aili Mari. 2000. *Women and Politics in Uganda*. Oxford: James Currey.
- Tripp, Aili Mari. 2001. “Women’s Movements and Challenges to Neopatrimonial Rule: Preliminary Observations from Africa.” *Development and Change* 32:33–54.
- Tripp, Aili Mari. 2006. Uganda: Agents of Change for Women’s Advancement? In *Women in African Parliaments*, ed. Hannah Britton and Gretchen Bauer. Boulder, CO: Lynne Rienner pp. 111–132.
- Tusisicny, Andrej. 2017. “Reciprocity and Discrimination: An Experiment of Hindu-Muslim Cooperation in Indian Slums.” *Political Psychology* 38(3):409–426.
- Twenge, Jean M., Roy F. Baumeister, C. Nathan DeWall, Natalie J. Ciarocco and J. Michael Bartels. 2007. “Social Exclusion Decreases Prosocial Behavior.” *Journal of Personality and Social Psychology* 92(1):56–66.
- UN Women. 2017. Across Divides to Advance Women’s Rights through Dialogue: Experiences from the Ground. Technical report UN Women Cairo, Egypt: .
- Valk, Anne M. 2008. *Radical Sisters: Second-Wave Feminism and Black Liberation in Washington, D.C.* Urbana: University of Illinois Press.
- Van Doesum, Niels J., Joshua M. Tybur and Paul A.M. Van Lange. 2017. “Class Impressions: Higher Social Class Elicits Lower Prosociality.” *Journal of Experimental Social Psychology* 68:11–20.
- Van Vugt, Mark, David De Cremer and Dirk P. Janssen. 2007. “Gender Differences in Cooperation and Competition: The Male-Warrior Hypothesis.” *Psychological Science* 18(1):19–23.
- Walsh, Denise M. 2012. “Does the Quality of Democracy Matter for Women’s Rights? Just Debate and Democratic Transition in Chile and South Africa.” *Comparative Political Studies* 45:1323–1350.
- Wang, Vibeke. 2013. “Women Changing Policy Outcomes: Learning from Pro-Women Legislation in the Ugandan Parliament.” *Women’s Studies International Forum* 41:113–121.  
**URL:** <http://dx.doi.org/10.1016/j.wsif.2013.05.008>

- Wantchekon, Leonard. 2003. "Clientelism and Voting Behavior: Evidence from a Field Experiment in Benin." *World Politics* 55(03):399–422.
- Weeks, Ana Catalano. 2018. "Why Are Gender Quota Laws Adopted by Men? The Role of Inter- and Intraparty Competition." *Comparative Political Studies* 00(0):1–39.
- Wilkinson, Richard G. and Kate E. Pickett. 2017. "The Enemy Between Us: The Psychological and Social Costs of Inequality." *European Journal of Social Psychology* 47:11–24.
- World Economic Forum. 2017. The Global Gender Gap Report 2017. Technical report World Economic Forum Geneva, Switzerland: .  
**URL:** [http://www3.weforum.org/docs/WEF\\_GGGR\\_2017.pdf](http://www3.weforum.org/docs/WEF_GGGR_2017.pdf)
- Yamagishi, Toshio and Nobuhiro Mifune. 2009. "Social Exchange and Solidarity: In-Group Love or Out-Group Hate?" *Evolution and Human Behavior* 30(4):229–237.
- Zetterberg, Pär. 2008. "The Downside of Gender Quotas? Institutional Constraints on Women in Mexican State Legislatures." *Parliamentary Affairs* 61(3):442–460.
- Zetterberg, Pär. 2012. Political Engagement and Democratic Legitimacy in Mexico. In *The Impact of Gender Quotas*, ed. Susan Franceschet, Mona Lena Krook and Jennifer M. Piscopo. Oxford University Press pp. 173–189.